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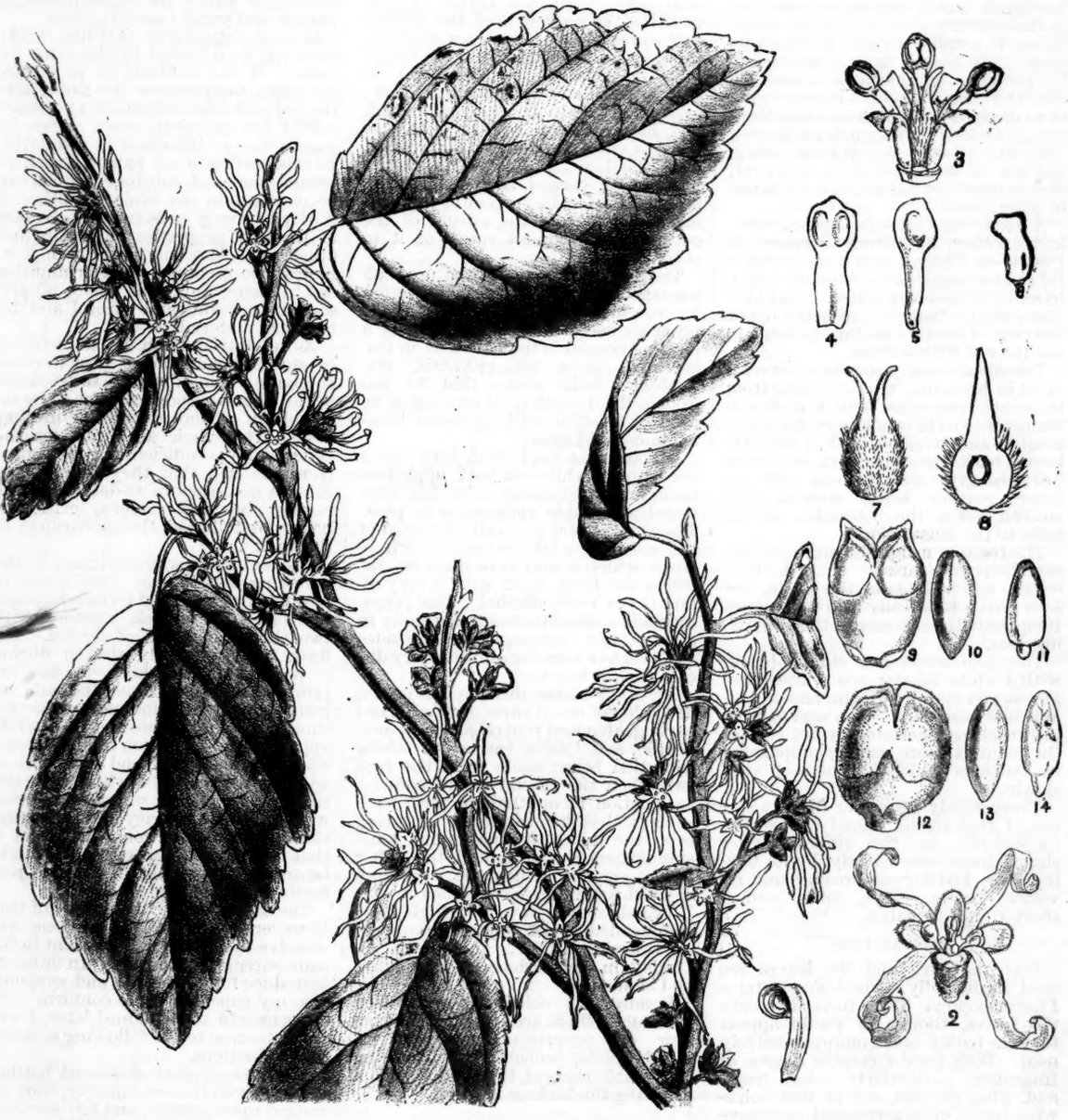

HAMAMELIS VIRGINICA L. (Witch Hazel.)

1. Petal, greenish or golden-yellow, ½ to ⅝-inch long. 2. Flower, generally 3 or 4 together forming a globose head, surrounded by an involucre of 3 ovate leaflets. 3, Stamen and staminodes (there are 4 fertile stamens opposite the sepals, and 4 staminodes opposite the petals). 4 and 5. Stamens. 6. Staminode 7. Ovary. 8. Vertical Section of young Carpel. 9. Ripe fruit. 10. Seed. 11. Embryo. 12. Ripe fruit of *H. japonica*. 13. Seed of do. 14. Embryo of do.

HAMAMELIS VIRGINICA.*

THE so-called Witch-Hazel derives its name from the similarity of its leaves to those of the English hazel (*Corylus Avellana* L.). The latter has been used from time immemorial as the attribute or divining rod of witches, and in the earlier days of the American Colonies the American "witch-hazel" was made to do duty in place of the English.

The Witch-hazel (*Hamamelis virginica* L.), which is also called, in some sections, "winter-bloom," "snapping hazel-nut," "spotted alder," etc., occurs in nearly all parts of the United States, chiefly in damp woods and thickets, along the moist banks of rivers east of the Mississippi, from the Mexican Gulf to Canada but, according to Pursh, also on hills and in stony places. Usually it is a bush or tall shrub, but sometimes attains a height of twenty feet. Like many other Eastern American trees and bushes, it blossoms late in autumn, from September to November, when the leaves are falling, and contributes its share to the many-colored hues of the forest in the fall of the year. Bigelow* says of it: "Among the crimson and yellow hues of the falling leaves there is no more remarkable object than the witch-hazel, in the moment of parting with its foliage, putting forth a profusion of gaudy, yellow blossoms, and giving to November the counterfeited appearance of spring.

Its Latin name, *Hamamelis*, is borrowed from the Greek, and was applied by the ancient Greeks to a kind of quince, medlar or pear, but the identity of this cannot now be recognized. It was interpreted by the ancients as meaning "resembling an apple-tree," being evidently applied by them to a tree bearing a fruit resembling apples. It is, therefore, rather singular that Linné should have selected this term to denote our witch-hazel, which certainly does not fit the above comparison.

* The illustration is copied from *Curtis' Botanical Magazine*, No. 463, tab. 6684.

* Florula Bostoniensis. 8vo, Boston, 1814, p. 40.

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G. B. Emerson* says of it: "The union, on the same individual, of blossoms, faded leaves, and ripe fruits, not very common in any climate, led Linnæus to give to an American plant a Greek name significant of the facts of its producing flowers together with the fruit." Of course, this interpretation is not correct, no such meaning being contained in the term. But the curious appearance of old leaves, flowers, and fruit, on one and the same shrub, is by some supposed to have originated the name "witch-hazel."

That the popular notion of the mysterious power of witch-hazel, resembling that originally ascribed to the European hazel, was quite prevalent in this country even before the Revolution is testified to by Carver,† who says: "It is said to be possessed of the power of attracting gold and silver, and that twigs of it are made use of to discover where the veins of these metals lie hid; but I am apprehensive that this is only a fallacious story, and not to be depended on; however, that supposition has given it the name of witch-hazel."

A paper in Hutton's Mathematics, and another, by Alfred Burnson, of Prairie du Chien,‡ give some wonderful stories about the power of witch-hazel in discovering water. And Porcher§ relates that persons in the upper districts of South Carolina pretend to use the rod with success.

The shrub usually consists of several crooked branching trunks arising from the same root, some 4 to 6 inches in diameter, 5 to 12 (sometimes 20) feet in height, and covered with a smooth, brown bark, the older bark becoming brownish-gray and fissured, and the inner portion being whitish and smooth. (For the botannical details refer to the illustration.)

The fruit is a light-brown, nut-like, roundish-oval capsule or pod, two-celled, which incloses the seeds, but soon bursts elastically into two pieces. It ripens in the summer of the succeeding year.

The two seeds are shining-black, with a white hilum; are white, oleaginous and starchy within, and are eatable like hazel-nuts. The seed of trees grown abroad germinates but rarely; the plant is there usually propagated by cuttings which strike root very slowly.

There is only one other distinct species of Hamamelis, namely, *Hamamelis japonica*, and this differs only by slight characters, namely, by its having more leaf-nerves, broader and revolute, brown calyx lobes, and a shorter fruiting calyx.

MEDICAL USES.

Both the bark and the leaves are used medicinally. The United States Pharmacopœia (1880) recognizes only the leaves, though it would appear that the bark is much more extensively used. Both have a certain degree of fragrance, particularly when fresh, and, when chewed, are at first somewhat bitter, quite astringent, and leave a pungent, sweetish, and persistent after-taste. Water as well as alcohol extracts their virtues. They appear to contain, according to Dr. A. Lea, besides the usual plant constituents, a peculiar bitter principle; this author also first drew attention to the large amount of tannin they contain.‖

Witch-hazel is reputed to be tonic, astringent, and sedative. A decoction of the bark (1 oz. to 1 pint) has been found useful in hemorrhages, as well as in diarrhœa, dysentery, and excessive mucous discharges. Its supposed beneficial effect in incipient phthisis, where it has been thought to unite anodyne influences with its others, is probably unsupported by facts.

The bark is reported to have long been known to the Indians—which is not all surprising—as an excellent remedy in swellings and tumors of a painful character, as well as in external inflammations, applied in form of a poultice.

When the negro slaves endeavored to procure abortion by means of cotton root, miscarriage is said to have been prevented by Hamamelis. This is vouched for by Dr. W. W. Durham,* who says: "At one period of my practice, the negroes used the cotton-root so frequently to produce abortion, that my supply of black haw [*Viburnum prunifolium*, recommended in 1847 by Dr. Phares, of Newtonia, Miss., as an antitocic], became exhausted, and, having heard of the power of the hazel to effect the purpose for which I used the haw, I resorted to it (the hazel) with perfect success. Having only used it for the purpose of preventing abortion from the effects of the cotton-root, I cannot speak of it in other cases."

The decoction may also be used advantageously as a wash or injection for sore mouth, painful tumors, and is probably useful in any cases where a local astringent is indicated, as in leucorrhœa, gleet, conjunctivitis, etc. Professor Stillé states that he has known the decoction or infusion to be used, as a lotion, with apparent benefit, in crusta lactea.

An ointment made with lard and a decoction of white-oak bark, apple-tree bark, and witch-hazel bark, has been found a valuable application to piles. The same is very generally reported of the so-called white extract of witch-hazel, which is said to be made by distilling the fresh bark with a very dilute (6 per cent) alcohol. This preparation is a popular external remedy in sprains and bruises, and is besides vaunted as a cure for almost every disease flesh is heir to.

Dr. King states that he has used a decoction of equal parts of witch-hazel bark, golden seal root (*Hydrastis canadensis*), and lobelia leaves—a strong decoction being made from the first two, then the lobelia leaves added—as a lotion in ophthalmia, with such success, that he succeeded in curing even the most obstinate and long-standing cases; and he adds that other practitioners to whom he communicated this fact, have confirmed it.

The decoction was also highly recommended by Dr. James Fountain,† of Peekskill, N. Y., and Dr. N. S. Davis,‡ in hemorrhage of the lungs and stomach.

Besides the colorless, or distilled "extract," there are several other popular or proprietary preparations, mostly made, probably, by dissolving the soluble parts of the residue left on distilling the bark or leaves.

The Relief of Toothache.—A correspondent in the *British Medical Journal* gives the following modification of the application for the relief of toothache, devised by Professor Babbitt: Melt white wax or spermaceti, 2 parts; and when melted, add carbolic acid crystals, 1 part; and chloral hydrate crystals, 2 parts; stir well until dissolved. While still liquid, immerse thin layers of carbolized absorbent cotton-wood and allow them to dry. When required for use, a small piece may be snipped off and slightly warmed, when it can be inserted into the hollow tooth, where it will solidify.

* Report on the Trees and Shrubs . . . of Massachusetts, p. 472.

† Travels through the Interior Parts of North America in the years 1766, '67 and '68, by J. Carver, 8vo. 8vo, London, 1781, p. 509.

‡ Patent Office Report on Agriculture, 1851, p. 16.

§ Resources of the Southern Fields and Flowers. 8vo. Charleston. 1869, p. 62.

‖ Tilden's Journ. of Mat. Med., 1868, Feb. See also H. K. Bowman in Amer. Journ. Pharm., 1869, 164.

* Atlanta Med. and Surg. Journ., 1867, and Richmond Journal, January, 1868.

† New York Journ. Med., x., 208.

‡ Trans. Amer. Med. Assoc., I., 350.

[ORIGINAL COMMUNICATION.]

DETERMINING SOLUBILITIES.

BY PROF. J. U. LLOYD, OF CINCINNATI.

DURING the revision of the Pharmacopœia, it was found necessary to ascertain the solubilities of certain substances in alcohol and in water, cold and boiling. Part of the work was assigned to me, and the investigations which followed proved both instructive and interesting. It appears to be proper that I should place on record the result, as, without a proper consideration of certain points which may be readily overlooked, I feel that different deductions may follow the experiments of patient and careful investigators.

It is doubtless true that like conditions will be followed by the same results. If the methods of procedure are alike, temperature the same, and the solvent and substance to be dissolved are identical, there seems no reason for a difference in solubility. In this portion of my paper, I wish to assume that each substance named can be obtained in the same condition of purity by every person and possessed of the same properties physically and otherwise. The only point then is to find if the methods of determination can influence the result where all persons are accurate and careful and use identical materials.

As an introduction, let us refer to crystallized sulphate of iron (ferrous sulphate). This substance, the revisors of the Pharmacopœia assume to be insoluble in alcohol of specific gravity 0.820. That their authority for the statement was sufficient may be argued from the fact that they did not consider it necessary to re-determine the matter and that adverse criticisms have not followed the appearance of the book.

The statement was confirmed by the following experiment. One grain of powdered crystallized ferrous sulphate was placed in a flask together with two thousand grains of alcohol. The flask was frequently shaken during a period of two days, at the expiration of which time the salt remained apparently undissolved, having simply become opaque and of a white appearance. A portion of the alcohol was then decanted and evaporated, and the dish washed with a little distilled water. This water was tested with solution of ferricyanide of potassium without reaction. Hence it is that from such an experiment it might be argued that sulphate of iron is perfectly insoluble in alcohol.

The same quality of sulphate of iron however, under other conditions will dissolve to a more or less extent in the same strength of alcohol. In order to introduce my argument and systematize my paper so as to conform with experiments to be named later, I will call attention to the following series of determinations.

Ten ground-glass stoppered bottles, of thirty-two ounces capacity, were arranged upon a table, and ten avoirdupois ounces of alcohol (specific gravity 0.818), poured into each. Then one ounce (avoirdupois) of finely ground crystallized sulphate of iron (P. and W.), of the quality known in commerce as "chemically pure" was introduced into the first bottle and labelled No. 1. Into the second bottle two avoirdupois ounces of the salt were introduced and the bottle labelled No. 2. Three ounces were introduced into the third, and so on with each successive bottle, until the tenth contained ten ounces of the iron salt. These bottles were securely stopped at once (August 1st, 1883), and all of them were shaken each day, sometimes several times daily, until October 16th.

It is recorded in my note book that, excepting the coarser grains, the salt in No. 1 assumed a white color in a few days. This change was noticed

in a less degree with No. 2, and to a decreasing extent with each successive specimen until No. 8 was reached from which point (8, 9 and 10) there was little alteration. At the expiration of the time named above (October 16th), the first eight specimens had largely changed in appearance from green to white, those containing the smaller amounts of iron being more largely composed of the white powder. Numbers 8, 9 and 10, however, retained nearly their original color.

Two fluid drachms of alcohol were then carefully abstracted from each bottle and separately arranged in successive vials. One minim of solution of ferricyanide of potassium was added to each of these solutions with the following result.

No. 1 (1 oz.	of	ferrous	sulph.)		pale green
" 2 (2	"	"	"	"	bluish "
" 3 (3	"	"	"	"	blue
" 4 (4	"	"	"	"	dark blue

From numbers 5 to 10 the intensity of the color seemed to increase, but as the product was a very dark blue in each instance, the difference in color was not readily observed. However, in from 6 to 10, a blue sediment formed almost at once, and this precipitate appeared to increase in bulk with the successive increase of the ferrous sulphate. It was not until five days had passed that a sediment was noticed in No. 1, and at that time the liquid in the bottle was of a greenish-blue color, while that overlying the sediment in each of the others was transparent. This reaction demonstrated that crystallized ferrous sulphate will dissolve in alcohol of spec. grav. 0.818, under the proper conditions, and to further determine the matter, the following investigations were instituted. The specific gravity of each alcoholic solution was obtained by carefully decanting the alcohol into a bottle and after it had stood for some hours, to insure a clear liquid, it was poured into the specific gravity bottle.

No. 1	was	of	the	specific	gravity 0.8201
" 2	"	"	"	"	0.8243
" 3	"	"	"	"	0.8267
" 4	"	"	"	"	0.8300
" 5	"	"	"	"	0.8308
" 6	"	"	"	"	0.8340
" 7	"	"	"	"	0.8343
" 8	"	"	"	"	0.8333
" 9	"	"	"	"	0.8343
"10	"	"	"	"	0.8295

It will be observed that a moderately steady increase of gravity followed with each liquid from No. 1 to No. 7, (inclusive), but not from No. 8 to No. 10 (inclusive), the gravity of No. 9 being the same as that of No. 7 and that of No. 10 being less than any which followed No. 3. If the specific gravity of each liquid was a criterion of the proportion of the ferrous sulphate which was dissolved, it would follow that there should not be an increase of dissolved iron salt after No. 7.*

In order to arrive at the actual amount of the ferous sulphate, two ounces of each solution (severally) were evaporated to dryness, or until the alcohol was dissipated, the residue dissolved in water, filtered, the filtrate boiled with slight excess of nitric acid and precipitated with ammonia water. The precipitate was collected on a filter paper, washed, dried and incinerated. From the result, by the ordinary methods of calculation, it was shown that

10 fluid ounces of alcohol dissolved
0.0243 grain from 1 ounce of ferrous sulphate;
0.03298 grain from 2 ounces;
0.03819 grain from 3 ounces;
0.06249 grain from 4 ounces;
0.06249 grain from 5 ounces;
0.06772 grain from 6 ounces;
0.08506 grain from 7 ounces;
0.10465 grain from 8 ounces;
0.14235 grain from 9 ounces;
0.15450 grain from 10 ounces;

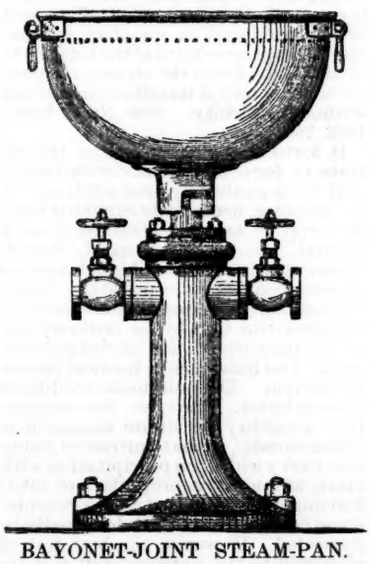
Recapitulation.—It will be seen from the foregoing experiments, that while crystallized ferrous sulphate is not very soluble in officinal alcohol, it *will* under favorable circumstances dissolve in an alcohol which is even a trifle stronger than the officinal preparation.

It is also shown that the amount dissolved was influenced by the proportion of the ferrous sulphate to the alcohol and that there was a steady increase of solubility as the amount of iron salt increased.

If the investigator is satisfied to experiment with a mixture of very small amounts of the ferrous sulphate and large amounts of alcohol, arguing that the increased amount of solvent should proportionately dissolve the substance under consideration, he will doubtless find that crystallized ferrous sulphate is *insoluble* in officinal alcohol. If, on the contrary, he happens to use other proportions, he may obtain discordant results. An investigator using the proportion of ten ounces of alcohol and ten ounces of ferrous sulphate, would, according to the foregoing experiments, decide that officinal alcohol would dissolve 63½ times as much ferrous sulphate, as shown by the experiments of an equally careful man who used the proportion of ten ounces of alcohol to one ounce of ferrous sulphate.

There are several other points to consider even in the single example named in this paper, but this, together with an account of other experiments, will be detailed at a future time.

[To be continued.]



BAYONET-JOINT STEAM-PAN.

THE accompanying illustration represents a steam-kettle constructed so that it may be at any time detached from the support and steam supply by a simple half turn. This is a very useful improvement, inasmuch as the contents may then be poured out; while the steam-kettles as usually constructed have to be emptied by dipping the contents out or by the aid of a stop-cock, which is often difficult to clean. The socket upon which the kettle is placed is very slightly conical, so that the half-rotary motion by which the kettle is adjusted makes the joint steam-tight. The kettle is, of course, double-jacketed; the inlet for steam and outlet for the condensed water are situated in the upper part of the leg or support on which the kettle stands. These kettles are made and sold by Volkmar, Haenig & Co., of Dresden.—*Chemiker Zeit.*

Iodine in Cod-Liver Oil.*

IT was proposed to verify the statement in Garrod's "Materia Medica" that cod-liver oil contains 0.06 per cent of iodine.

If this statement were true, cod-liver oil would be one of the richest sources of iodine with which we are acquainted. The average yield from laminaria drift, on the large scale, is 0.025 per cent, but many thousands of tons of seaweed have been made into kelp and worked for iodine which have yielded not more than 0.005 per cent, and some even less than this.

Most of the published analyses of cod-liver oil are much too high in the amount of iodine found. The exceptions are the results obtained by Mr. Mitchell Bird, which are much nearer the truth. The method of analysis adopted was that used for kelp.

5,000 grains of oil were taken, saponified with 1,000 grains of caustic soda, pure and free from iodine, then carbonized in a large porcelain crucible; the resulting charcoal was heated with hot water, and made up to 5,000 grains measure. One-tenth of this, or 500 grains, was found quite sufficient to detect the presence of iodine and to estimate it. Three experiments were made, taking 500 grains, 2,500 grains, and 1,000 grains respectively, with pretty concordant results.

The following six specimens were selected:

(1) Cod-liver oil, pale; (2) Norway; (3) manufactured by Carr & Sons, Berwick-on-Tweed; (4) English; (5) Newfoundland; (6) light brown.

The mean proportions of iodine found were, per cent:

(1) 0.000410; (2) 0.000434; (3) 0.000276; (4) 0.000138; (5) 0.000315; (6) 0.000360. Mean percentage of iodine, 0.000322.

The herring contains four times the amount of iodine contained in the cod-fish, and more than in any of the samples of cod-liver oil; if, therefore, the iodine be the medicinal element, Scotch herring, salted, should be recommended; it is very cheap at present.—*Chem. and Drug.*

Naphthalin.

NAPHTHALIN is a coal-tar product, discovered by Garden in 1820. It resembles camphor, being a white crystalline body, and a hydrocarbon (formula $C_{10}H_8$). It is inflammable, insoluble in watery menstrua, evaporates slowly at all temperatures, and its vapor is destructive to insects. Spec. grav. (at ordinary temperatures) 1.1; it melts at 79.2 (C.), and boils at 214°. It sublimes in thin scales at 150° (C.). It is taken up by steam, so that traces can be detected in urine and organic bodies by simple distillation. It is insoluble in alkalies and weak acids; soluble in ether at ordinary temperatures; in hot alcohol, in concentrated sulphuric acid at a high temperature, and in various oils and fats. Owing to its volatility, the atmosphere of a room may be easily saturated with it; it is only necessary to sprinkle some naphthalin on the floor or in a vessel of water (to be afterward raised to boiling), when it will permeate the room and condense on the walls. It has a penetrating odor and a taste like coal-tar. The price is low, as it is derived from the refuse of gas works.

Fischer claims for this agent in dressing wounds the following advantages: simplicity, innoxiousness, cheapness; while it has the disadvantages of insolubility, penetrating odor, and the production of profuse secretion on large wound surfaces.

It is especially suited as an antiseptic in kidney diseases; patients with a

* I find that I cannot consider in this letter all of the points which are introduced by these experiments. Indeed it will be best to omit further reference to this feature of our subject, until I can bring forward other tables which would be out of place in this paper.

* Abstract of a paper read by Edw. C. C. Stanford, F.C.S., at the late Brit. Pharm. Conf.

sensitive skin (*i. e.*, all persons susceptible to carbolic acid); in children (in combination); in wounds in deep cavities where secretions easily decompose; after resections; removal of tumors, etc.; and in wounds attacked by erysipelas. Naphthalin is also most useful in every department of hospital hygiene.—*Phila. Med. Times.*

Black Surgical Silk

Is furnished by Snowden, of Philadelphia, in fourteen sizes. The finest sizes are adapted to plastic surgery and delicate operations, the medium sizes to ordinary operations, and the strongest when great strength of ligature is required. In operations like circumcision, where considerable swelling is apt to conceal the sutures, the black silk is more readily seen than the white, and may be removed with less disturbance of the flaps.

Successful removal of sutures is often a matter of great importance, as in ophthalmic and plastic operations where the slightest injury to the newly-united edges is to be avoided; and it is in these cases that the black silk is especially useful. Moreover, this silk, dyed with iron, is less irritating to the flesh than white lead-dyed silk, and sutures will remain a long time without causing inflammatory action.—Dr. G. D. Hersey, of Rhode Island.

Sesame Oil: Its Suitability for Pharmaceutical Uses.*

THOMAS MABEN finds that sesame oil is very suitable for preparing the plasters of the British Pharmacopœia. Lead plaster so made is more adhesive than that prepared from olive oil, and does not become so friable, but a larger proportion of lead oxide is required. Adhesive plaster requires less resin, and is consequently less irritating to inflamed surfaces, and belladonna and other plasters, which are frequently kept ready spread, do not crack so readily when lead plaster made from sesame oil is the basis.

With the exception of ointment of nitrate of mercury, the ointments of the British Pharmacopœia can also be very successfully prepared by substituting sesame oil for olive and almond oils. In the case of the exception referred to, a peculiar principle, common to most seed oils, has a reducing action on the mercurial salt, with the result that the ointment becomes discolored and unfit for use in the course of a few weeks.

IN writing upon the same subject, Michael Conroy, F.C.S., said the oil he used was from a reliable source. It was of a pale yellowish color, of sp. gr. 0.921, possessing a bland, sweet, nut-like taste, with neutral reaction. Concentrated sulphuric acid converted it into a deep, brownish-red jelly. The addition of two per cent of a cooled mixture of equal parts of strong nitric and sulphuric acids, caused it to acquire a deep-green color, rapidly changing into deep-brown; and to other well-known tests it answered equally satisfactorily.

From experiments which were detailed, it was very evident that this oil could not replace olive oil for chief pharmaceutical uses, since plaster made with it would not set sufficiently to be portable, either in the form of rolls or when spread for use; neither can it be used satisfactorily for lime liniment, because of its tendency to separate. Liniment of ammonia made with it is a little thinner than usual. These defects are undoubtedly due to the large amount of olein contained in this oil, and consequently lesser proportion of the more solid glycerides, and it is very singular that these defects are what chiefly recommended the oil to the authors of the "Pharmacographia," namely, the "larger proportion of olein and consequent lesser tendency to solidify." Where, however, no chemical combination takes place and where simply a bland sweet oil, possessing good keeping properties, is required as an ointment basis, perhaps no better could be chosen, and on this account the author considers it much more suitable as a substitute for almond oil in the preparation of ointments. Samples of the principal ointments contained in the British Pharmacopœia had been prepared, which were quite equal in every respect to those prepared with almond oil.—*Chem. & Drug.*

* Abstract of two papers read at the late Brit. Pharm. Conf.

Aconitine for Internal Administration.*

ACONITE seems to be more used in medicine in America than in England. Dr. Squibb has recommended the use of a fluid extract of the root, which itself is very variable in quality. After the numerous scientific researches on the subject, this seems a distinct retrogression.

Aconitum Napellus is the species almost always ordered. Its alkaloid can be prepared in a crystallized state, and is easily identified. Dr. Fraser, of Edinburgh, has investigated its physiological action, which differs from that of the alkaloid of *A. ferox*. The latter root, whenever it can be obtained, is, however, used for the manufacture of the alkaloid. The root of *A. paniculatum* sometimes occurs, introducing another alkaloid of different properties.

Aconitine, before it can be safely used for internal exhibition, must be separated in a crystalline condition. This is not difficult, but it is wasteful. Ordinary skill only is required, helped by extraordinary patience. The nitrite is the best of its salts to crystallize, and can be produced in quantity averaging, perhaps, one-third of the total yield of alkaloid. From the nitrate, the pure alkaloid, or any of its salts, can be made without difficulty. [See NEW REM., 1882, 265.]

It fortunately happens that the nitrate of fer-aconitine is crystallizable only from a strongly acid solution. It is, therefore, necessarily excluded from the crop of crystals obtained from a neutral, or nearly neutral, liquid. There remains the possible admixture of picr-aconitine, the nitrate of which crystallizes in forms so like those of nap-aconitine that by an ordinary observer they would not be distinguishable. The bitterness is its most patent distinction. The poisonous aconitines are not bitter. Moreover, its comparative solubility in dilute ammonia is characteristic, so that a nitrate of aconitine that yielded, on precipitation with dilute ammonia, a proportion of alkaloid much less than that due to its centesimal composition would deservedly be suspected. However, the best test of all would be the physiological test applied to each batch of alkaloid by competent experimenters, and a series of preparations so guaranteed, produced by a house of known reputation, would soon be accepted by the medical profession as a most useful addition to the list of heroic remedies.—*Chem. and Drug.*

[The above paper furnishes sufficient grounds for a belief that a fluid extract will still continue to be employed when a safe and reliable preparation of aconite is desired.—ED. A. D.]

Chancellor Carroll, of South Carolina, died recently from erysipelas, following a spider's bite.

* Abstract of a paper read by T. B. Groves at the late Brit. Pharm. Conf.

Spirit of Nitrous Ether.*

AFTER mentioning some points in the history of the preparation, the author proceeded to discuss the pharmacopœial process devised by Professor Redwood. He believed that the moderate action and constant temperature was due, not to the formation of nitrous acid, but rather to the action of the sulphuric acid upon nitrate of copper, or to the increase of the boiling point by the admixture of sulphuric acid.

Nitrate of copper was first prepared with excess of acid, and then distilled with sulphuric acid and rectified spirit.

The product was four fl. oz. more than the British Pharmacopœia directs, and three to four per cent of ethereal fluid separated on application of the Pharmacopœia test.

Another experiment was tried, with a smaller quantity of nitric acid, equal to the B. P. quantity. The product separated nothing with solutions of chloride of calcium. No. 1 had only one advantage over the Pharmacopœia, viz., the greater regularity of its distillation, and required the use of much more copper, and twice as much nitric acid. Some base was sought which would be cheap, constant in composition, easily decomposed at the required temperature by the sulphuric acid, and exist either in the state of nitrate in commerce, or in that of some compound which could be converted into a nitrate without loss of nitric acid.

Calcium was tried, calcium carbonate being used in place of copper in the pharmacopœial process.

The distillation proceeded with great regularity from the beginning to the end; the product was 86½ fl. oz. of a liquid of sp. gr. 0.8453 at 60½° F., and separated 3 to 4 per cent by the chloride of calcium test.

The first 82½ fl. oz. were tested, and found only to separate about 1 per cent, but the remaining 4 fl. oz. of product raised it to the strength named.

Another lot was tried with a third less spirit added to the sulphuric acid. The product was 87½ fl. oz., sp. gr. 0.8463, and 3 to 4 per cent of ethereal fluid separated. The distillation occupied less than an hour.

To test the idea that the sulphuric acid might so raise the boiling-point of the mixture of nitric acid and spirit as to reach the temperature necessary for the formation of the nitrate of ethyl, another experiment was tried with pharmacopœial proportions, omitting the copper. The product, perhaps through some neglect, was not satisfactory.

Samples made by the B. P. process, and by the same with the substitution of chalk for copper, have been kept seven months without deterioration in bottles, *not full*, exposed to bright light in a warm room, and, moreover, have had a number of small samples taken from them, as would be the case in dispensing. The advantages of the process suggested are: (1) The product is 5 per cent greater; (2) the cost is less; (3) the process is more analogous to the old one; (4) occupies much less time; (5) the distillation is much more regular; (6) the proportion to be distilled is one-third less. Advantages 4, 5, and 6 recommend it as a manufacturing process.

One thing at least seems perfectly clear, viz., that the success of the B. P. process is not due to the formation of nitrous acid, but to the increased boiling-point resulting from the presence of the sulphuric acid, which is gradually eliminated, as the distillation proceeds, by its action upon the coper, or upon nitrate of copper, and thus maintains a proper equilibrium.—*Chem. and Drug.*

* Abstract of a paper read by Alfred Clay Abraham, F.C.S., at the late Brit. Pharm. Conf.

Collodion Combinations.*

THE advantages of combinations of collodion are that, unlike ointments, they remain fixed for some time to the part applied, and are cleanly. It remains, however, to be proved whether the remedial effects of the several substances in combination with it will be obtained. Collodion must retard the action more or less of all of them, but at the same time it is reasonable to expect some of those under consideration may be found useful. The following have been found suitable:

Wood-tar collodion. — One drachm by weight of wood-tar with 4 of collodion.

Coal-tar collodion.—The same proportions of an alcoholic extract of coal-tar of the consistence of syrup with collodion. (The addition of 30 grains of iodine to the fluid ounce of ether of these preparations does not affect its consistence or adhesive properties.)

Oil of cade, 1 by weight to 5 of collodion.

Gurjun oil, 1 by weight to 3 or 4 parts of collodion.

Oleic acid and Peruvian balsam, each in the proportion of 1 by weight to 4 of collodion.

Flexible collodions. — Glacial acetic acid, 1 part by weight, flexible collodion, 4 parts.

Carbolic acid, in crystals, 1 part to 4 of flexible collodion.

Creosote, 1 part by weight to 7.

Essential oil of mustard, 1 part by weight to 7 of flexible collodion.

Belladonna collodion: Macerate 60 grains of the alcoholic extract in a fluid ounce of flexible collodion for 24 hours, and decant the clear liquid.

Aconitia, atropia, and hyoscyamia dissolve very readily in collodion.

Veratria, 8 grains dissolved in 1 fluid drachm of oleic acid mixes with 7 fluid drachms of flexible collodion.

Morphia, 5 or 10 grains in a fluid drachm of the acid with 7 drachms of flexible collodion.

Ammoniated mercury, iodide of lead, and precipitated sulphur, each of them should be mixed with flexible collodion in the proportion of 1 drachm to 7 and 4 or 5 drops of castor oil.

Oleate of mercury should be mixed with collodion in the proportion of 1 to 4. To prepare the oleate, take 1,320 grains of oleic acid, dilute with three volumes of ether, add 420 grains of dry binoxide of mercury, and shake the mixture occasionally for 4 days, until the orange color of the binoxide disappears, allowing the creamy compound to evaporate without the application of heat. The dilution of the oleic acid with ether prevents caking; the oleate of mercury so obtained is of a yellowish-white color, of the consistence of vaseline.

Oleate of zinc will mix in the proportion of 1 part to 4 of collodion.

Iodide of cadmium dissolves in flexible collodion, 1 drachm mixed with 7 fluid drachms of the collodion and 4 drops of castor oil.

When iodide of sulphur is treated with collodion the iodine dissolves out and the sulphur subsides.—*Chem. and Drug.*

FUNNEL-SUPPORT.

A. HUCKLENBROICH, of Kempen on the Rhine, describes in the *Pharm. Zeitung* of August 1st, a novel funnel-support, which presents several useful features.

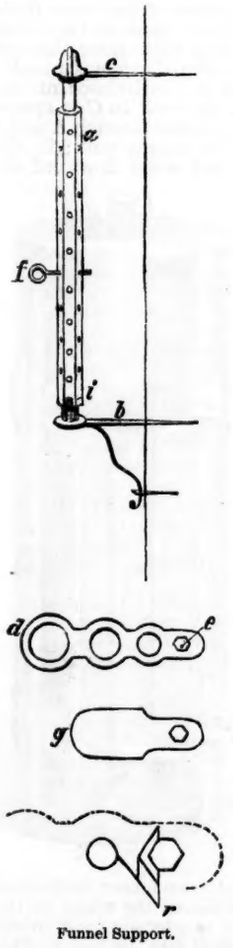
A wooden hexagonal rod, *a*, about 3 *cm.* (1¼ in.) in diameter and 60 *cm.* (24 in.) long, perforated with numerous holes, and rounded off, below and above, for a distance of about 5 *cm.* (2 in.), is held in place by two iron supports, *b* and *c*, which are fastened to the wall; the lower end is hollow, and rests upon a pin, *i*, projecting from the lower arm.

Three funnel-supports, *d*, about 35 *cm.* (14 in.) long are provided, each with three different sized, round holes, conically bored so that the funnels will firmly sit therein, and with a hexagonal hole at the end, which closely fits the wooden rod, and by means of which they may be raised or lowered in a perpendicular direction without swerving to or fro; being held in place by a pin passed through the holes in the rod.

In order to preserve the horizontal position of the funnel-supports, each of them is provided, in front of the hexagonal hole at the under surface, with a shoulder, *r*.

In addition, one or more small unperforated supports may be affixed to the rod, to hold small flasks for receiving the filtrate from any one of the funnels.

When the supports are not in use, they are pushed up and kept in place by the pin.



Funnel Support.

Tincture of Nux Vomica.*

TWELVE specimens of the tincture of nux vomica of the British Pharmacopœia† were obtained from the principal manufacturers in London, and they were subjected to analysis. When tincture of nux vomica is evaporated, a resinous mass remains, which will be found to be only partially dissolved by chloroform, the greater portion remaining insoluble. It is practically impossible to wholly extract the alkaloid from the mass by the use of chloroform alone. There are two ways in which the alkaloid may be isolated from it. (1). By treatment with ammonia water, which dissolves the resinous mass and allows the alkaloid to be easily extracted by one or two agitations with chloroform. The chloroformic solution is extracted by shaking with dilute sulphuric acid and the alkaloid extracted from this liquid, after the addition of excess of ammonia water, by chloroform. The chloroform is then evaporated and the residue dried at 100° C. (2). By treatment with dilute sulphuric acid, which entirely dissolves the mass, and after the addition of ammonia water the alkaloid can be extracted in the pure state by chloroform. These processes both yield finally the same result, as will be seen from the following figures, which represent the percentage of alkaloid found in a specimen of tincture analyzed in both the above ways:—

Process 1.....0.302 per cent.
Process 2.....0.304 "

A table of the results shows that the specific gravity of the tincture varied from 0.8552 to 0.8377, the percentage of total alkaloid from 0.360 to 0.124, but not always in harmony with the specific gravity. In the sample with specific gravity 0.8552 the percentage of total alkaloid was 0.1811; where the percentage of alkaloid was 0.360 the specific gravity 0.8450. Two other columns show the percentages of strychnine and brucine in the tincture, which by no means correspond to specific gravity or total alkaloidal strength.

It will be seen from these results that the tinctures of nux vomica now in commerce vary to a very considerable extent in alkaloid strength, the strongest tincture containing nearly three times as much total alkaloid as the weakest. It will be at once conceded that the important feature in a typical tincture of nux vomica is or should be uniformity in alkaloidal strength; the other constituents, though doubtless valuable, are of secondary importance. It directly follows (1) that a standard of uniformity should be officially recognized (2) that the pharmacist should be able to prepare and guarantee the tincture of standard strength. This accomplished, the pharmacist, having determined the amount of total alkaloid contained in the seeds from which the tincture is to be prepared, employs a sufficient quantity to produce by a process of complete exhaustion, the standard tincture.—*Chem. and Drug.*

The Poison of Serpents.

(*a.*) *Proteroglyphs.*—1. Naja tripudians (spectacle snake, cobra di capello), a native of Bengal.

2. Elaps corallinus (coral snake), an inhabitant of Asia, Africa and Australia; its mouth is so small that it can with difficulty only strike with its fangs.

(*b.*) *Solenoglyphs.* — 1. Crotalus horridus (rattlesnake), this species being, with the others, C. durissus and C. adamanteus, natives of America. Its bite is the most formidable of all, but it attacks only when irritated, and gives always a previous warning with its rattles.

2. Lachesis muta, the largest of all the poisonous serpents, belongs only to South America, especially Brazil; this is undoubtedly the one used by Hering, although he confounded it nominally with the Trigonocephalus.

3. Bothrops lanceolatus (lance snake, yellow viper) of Martinique, the only dangerous ophidian of that place. Its poison, without doubt, has been sometimes sold under the name of lachesis, and has been studied by Rufz and Ch. Ozanam.

(*c.*) *Vipers.*—Of which there are three species only in Europe.

The venom of the cobra is grayish; that of the lance transparent; of the crotalus, very clear, pale or yellowish emerald, of gummy consistence, without odor or taste.

* Abstract of a paper read by J. B. Barnes, pharm. chem., at the late Brit. Pharm. Conf.

* Abstract of a paper read by Windham R. Dunstan and F. W. Short, at the late Brit. Pharm. Conf.

† Nux Vomica, 2 av. oz.; alcohol (sp. gr. 0.838) to make 1 pint by percolation and expression.

The venom of the viper has the same appearance and color as the oil of sweet almonds. Dried, the poisonous liquid forms varnish-like scales. The rattlesnake, of large size, has at least 75 centigr. of poisonous fluid in each fang and loses three to four drops at each bite. A large viper possesses nearly 15 centigrammes.—*N. Y. Med. Times.*

Composition of Easton's Syrup.*

EASTON'S Syrup professes to contain "about 1 grain of phosphate of iron, 1 grain of phosphate quinia, and ½ grain of phosphate of strychnia in each fluid drachm."

This statement is made by Mr. Squire,† and a formula given for making the syrup, which is called "Dr. Easton's formula."

[The following is the formula: Sulphate of Iron, 2½ oz. (avoid.); Phosphate of Sodium, 3 oz.; Sulphate of Quinine, 1½ oz. and 48 grs.; Strychnine, 24 grs.; Diluted Phosphoric Acid (sp. gr. 1.080), 56 fl. oz. (imperial); Sugar, 56 oz.; Distilled Water, q.s. Dissolve the Iron and Sodium salts in separate portions of the water, mix the solutions, collect the precipitate, wash it, dissolve it and the alkaloids in the phosphoric acid, mix all together, and add the sugar to form a syrup.

The new U. S. Pharm. has adopted a different formula, leading to about the same result, except that it contains the ferric phosphate, is more easily worked, and yields a more stable product.—ED. AM. DR.]

Proportion of Quinia Sulphate.—If the directions given here are carefully followed, the product will measure between 24 and 24½ fl. oz., and will contain the quinia phosphate derived from 192 grains of sulphate. Approximately, then, 1 grain of sulphate of quinine has been used in the production of 1 fl. drachm of syrup, which corresponds to 0.86 grain of phosphate of quinia per fl. drachm. The amount of this latter, in a sample of syrup prepared in accordance with Dr. Easton's formula, deduced from the amount of alkaloid extracted, was 0.814 grain per fl. drachm, that is, 6.51 grains per fl. oz., whereas, in various other samples of commerce, the amount of phosphate of quinia varied from 1.57 grain to 7.13 grains. A sample prepared in accordance with the Pharmacopœia of the United States yielded alkaloid corresponding to 8.56 grains of quinia phosphate per fl. oz.

Proportion of Ferrous Phosphate.—Dr. Easton's formula would give a maximum of 5½ grains per fl. oz. only, instead of the 8 grains, as claimed. But even that amount of 5½ grains per fl. oz. is, most probably, not reached, since, in the process of decomposition, a quantity of sulphuric acid becomes liberated which doubtless prevents a portion of the ferrous phosphate from being precipitated. The amount of iron present in the samples examined was equivalent to ferrous phosphate varying from 0.97 grain per fl. oz. to 12.32 grains. The amount in a sample made in Easton's formula was found to be 4.7 grains.

Proportion of Strychnine.—This varied from 0.6–0.8 to 3 grains per 4 fl. oz.

The sample prepared according to formula showed 8 grains in 4 fl. oz.; by this test, theoretically, 1 grain should be found in this quantity.

Phosphoric Acid.—Commercial samples contained from 19.36 to 49.24 per cent of this acid. A sample made according to Easton's formula yielded 37.68 grains per fl. oz., and the theoretical amount is 38 grains. The sp. gr. varied from 1.270, in the standard sample, to 1.326.—*Chem. and Drug.*

* Abstract of a paper read by Rob. H. Davies, F.I.C., F.C.S., and Emil B. Schmidt, Ph.D., at the late Brit. Pharm. Conf.

† "Companion to the British Pharmacopœia," 13th edition, p. 148.

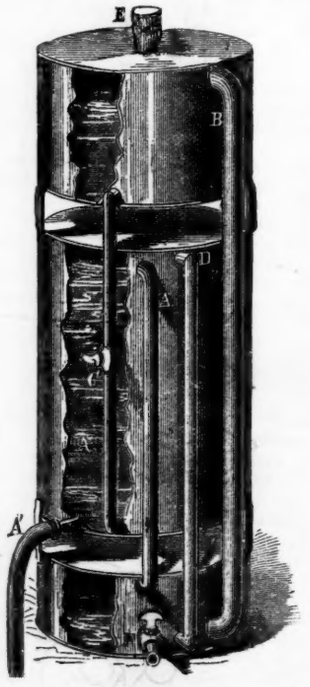
AUTOMATIC WATER STILL.

THE illustration represents an automatic water still for the use of druggists, chemical laboratories, etc. The lower vessel is the boiler, the middle one the condenser tank, the upper one a supply tank. The boiler and supply tank are closed, except for the attached pipes, etc.; the condenser tank has a loose cover.

Of the four pipes shown, *A* is the steam and condensed water tube, coiled, as shown, in the condenser tank full of water, and delivering distilled water at *A'*; *B* is a pipe leading from the water level in the boiler to the top of the supply tank; *C*, a pipe, with cock, leading from the bottom of supply tank to the bottom of condenser tank; and *D*, a pipe leading from top of the condenser tank to bottom of boiler.

E is an opening, with air-tight stopper, for filling supply tank; and *F*, a cock to draw off hot water from boiler.

The supply tank and condenser tank being filled with water (through *E* and the open top of condenser tank), *E* and the cock in *C* both closed, and the boiler empty, the cock in *C* is opened. Air has free access through *A* and *B* to the top of the supply tank; it, therefore, enters, and water flows out of supply



tank into condenser tank through *C*. This displaces the water in the upper part of condenser tank, which flows through *D* into the boiler. This action continues till the water has risen in the boiler above the lower opening of *B*, thus cutting off the supply of air to condenser tank, and so the flow of water. Heat is then applied to the boiler in any convenient way; boiling soon begins, steam passes off through *A* and is condensed therein, and delivered as distilled water at *A'*.

When, by evaporation, the water level in the boiler is lowered so as to uncover the lower opening of *B*, the air again enters the supply tank through *A* and *B*, water flows through *C*, and the water at the top of the condenser tank, now heated by condensing the steam, passes over into the boiler, till the opening of *B* is again closed. This action continues, at intervals, so long as water remains in the supply tank.

The advantages of this still are: that it is extremely simple, and always ready for use, upon simply filling and heating; requires no setting up, no adjusting of tubes to a water supply for condensing; it requires very little heat, beginning to boil very soon after heat is applied, and utilizes waste heat, as the process goes on. In the ordinary still, the whole mass of water must be heated before steam is obtained; in this only a stratum less than an inch deep, which is replenished by hot water, as it boils away, not stopping the boiling. It is entirely automatic; no attention is necessary from the time heat is applied till the supply tank is empty, or the water in the condenser tank all boiling-hot. The supply tank can be refilled, if desired, without interrupting the boiling.

Hot water can be drawn from the boiler without interrupting the boiling, and with the result of increasing the amount of distilled water yielded. It is cheap, its first cost being much less than that of a still doing the same work; and the heat required being less, the cost of running is proportionately reduced. The size shown in cut, with boiler, etc., six inches in diameter, is the ordinary druggist's and physician's size, and will yield a quart of distilled water with no attention, and any required amount more by refilling the supply tank, and drawing off hot water from the boiler. Larger sizes are made for other uses. We are informed that a still with condenser tank, fourteen inches in diameter, and fourteen inches high, has for six months furnished distilled water and hot water in abundance for from ten to seventeen students, in the laboratory of Iowa College, under the charge of the inventor.—*Sci. Amer.*

American Proprietary Medicines in Belgium.*

MY dispatch, No. 37, published in No. 25 of Consular Reports, has attracted some attention from those who deal in patent medicines both in the United States and in England. I have in consequence received many letters of inquiry from both countries. I have answered promptly all those coming from the United States. In order to be as precise and practical as possible, I herewith inclose an advertisement of *** ******* which may give our dealers in patent medicines a more thorough insight into what is required to introduce their goods than any plan I could devise.

*** ******* are here in full force, and have come to stay, by just such a method as the simple inclosure is a key to, and which is so well known with us. The inclosed advertisement† is distributed throughout the city, and handed to every passer-by. In the United States, seventy-five persons out of a hundred now refuse such advertisements when offered them on the streets. I have never seen one refused here, nor have I ever seen one cast aside without being read.

There is no country, therefore, where printer's ink is more potent. In each shop where *** ******* are sold, there is also a larger card than the one inclosed, on the same style, indicating that this article is dealt in. Since my dispatch No. 27, I am glad to see other familiar medicines in windows here, among them **** *** ***; wherever one of these medicines is seen, there also is seen the introducing agency, the card, gay and attractive enough to catch the eye of the passer-by, and call attention to the article.

The same thing is true also of our tobacco, cigars, and cigarettes. The Belgians and French take much pride in their show-windows, and arrange them in a style bordering on the artistic; and when they can find a chromo like that which is given to dealers in Richmond Gem Tobacco, or an attrac-

* From a report by U. S. Consul Geo. C. Tanner, of Liege and Verviers.

† This advertisement is in the form of an American flag, 3⅛ by 6⅛ inches, with the reading matter (in French) on the white stripes.

tive card like that which is given by the Chicago Cigarette exporters, in many instances the article is bought so that the show-window may be embellished by the advertisement. It will be seen by the inclosed advertisement that *** ******* retains its English name, and I would recommend this plan to all others. An idea pervades people that things that are foreign possess superior virtues to those found at home, and this is as much the case in Belgium as in the United States; therefore the foreign name is a recommendation. Dispatch No. 27, in addition to the letters written to this consulate, occasioned a visit from Mr. Charles Delacre, a well-known pharmacist of Brussels, who deals extensively in patent medicines, both American and English. He had a plan to mention by which American medicines might be introduced, which I asked him to write out for me and I would submit to the Department, which I herewith inclose. I shall offer no comments thereon, preferring that the American dealer should follow his own judgment in the matter.

Mr. Delacre, I am satisfied, possesses all the energy and other requisites for an intermediary, should the American dealer approve his plans. I beg to take this occasion to say to American dealers, that, while it affords me pleasure to be of the slightest service to them, a consul who performs strictly his duties, should be spared, as much as possible, unnecessary inquiry, that takes up his time, and which requires for an answer a repetition of what he has already written. I have no doubt that parties in most instances who make these inquiries do so from having seen short and imperfect extracts of the report in some journal when, were they to see it in full, every thing would be clear to them.

Norwegian Cod Fisheries.*

THE total catch in Lofoden and other districts, running up to nearly 24,500,000 of cod fish, shows a difference of 15,500,000 from last year, when the catch amounted to about 40,000,000. The reason for this considerable falling off cannot be attributed, as usually, when one year's catch proves smaller than another, to hindrances from fishing by storms and rough weather, but must be ascribed to the fact that the fish this year did not approach our coast and enter our "fjords" in such large quantities as usual.

It is a general belief that the cod fish which yearly visits our coasts have been suffering for several years for want of sufficient food. In this season the fish proved to be even thinner and more meagre than last year. When, under ordinary circumstances, 300 to 400 fish are required to fill a barrel with livers, the average quantity needed in the preceding season was about 700 fish; this year it has raised from 700 to 900, and sometimes up to 1,500, according to the different places. This circumstance will reduce the production of oil in a very considerable degree. When, further, 4 to 5 barrels of livers have been used for rendering a barrel of steam-refined oil, being the double of what is required when the liver is fat, it is evident that the quantity of all oils will be very limited. The poorness of the livers will also, no doubt, have influence upon the quality of the oil. Statement No. 2 shows the quantity of steam-refined oil produced in this season in the different catching districts compared with the production for the preceeding five years. Of oils it is merely the steam-refined cod-liver oil which is exported from here to the American market.

According to the official report, 31,200 men have been engaged in the fishing in Lofodon. Of this number, which is the largest ever recorded, were 7,800 men net-fishers, 19,750 long-line fishers, and 3,650 deep-line fishers. In 1882, the number of fishers amounted to 27,500; in 1881, 26,700; and in 1880, 25,500 men.

The number of vessels present in the district was smaller than last year. The largest number is stated to be 583; last year this reached 666. The number of boats amounted to 7,870, which is the greatest number ever known to have been gathered in Lofoden.

The weather was, as always, somewhat unfavorable in the beginning of the fishing season, but later it was upon the whole very favorable. In all there were thirty-two good sea-days, and thirty-two days when only a part of the day could be used for fishing. The season for catching in Lofoden lasts from the middle of January to the middle of April. Thirteen boats were wrecked and seventeen persons were drowned during the catch.

The average prices were 22 kroners* for liver and 36½ for fish roe per barrel, and 23¼ kroners for raw fish per 100 pieces.

The gross value of the catch is estimated at four and four-fifth millions of kroners, against six and four-fifth millions in 1882; five and one-tenth in 1881; and six and four-fifth millions in 1880.

The gross average earnings amount to 90 kroners for a net-fisher, 200 kroners for a long-line fisher, and 80 kroners for a deep-line fisher, against, respectively, 70 kroners, 340 kroners, and 150 kroners in last year.

The catch in Finmarken has not yet begun. The prospects for this fishery seem to be this year very doubtful. The prices of all fish goods have, therefore, risen considerably. A barrel of steam-refined oil costs at present $85.

*From a report by U. S. Vice-Consul John C. Isdahl, of Bergen.

*1 kroner = $0.26.8.

I.

STATEMENT SHOWING THE QUANTITY OF COD FISH CAUGHT IN THE DIFFERENT FISHING DISTRICTS, AND THE QUANTITY OF GOODS RESULTING THEREOF.

DISTRICTS.	COD FISH.	STEAM-REFINED OIL. BBLS.	LIVER. BBLS.	FISH ROE. BBLS.
Lofoden....	16,000,000	850	12,250	14,300
Nordland...	4,250,000	.....	4,600	4,800
Nordmor..	1,750,000	75	750	1,500
Romsdal	200,000	20	90	80
Sondmor....	2,200,000	100	1,000	2,000
Total....	24,500,000	1,045	18,690	22,680

II.

STATEMENT SHOWING THE PRODUCTION OF STEAM-REFINED OIL IN THE DIFFERENT FISHING DISTRICTS COMPARED WITH THE PRODUCTION IN THE FIVE YEARS PAST.

DISTRICTS.	1883. BBLS.	1882. BBLS.	1881. BBLS.	1880. BBLS.	1879. BBLS.	1878. BBLS.
Sondmor..	100	600	2,200	4,500	2,700	1,200
Nordmor..	50	60	800	1,800	†	†
Romsdal..	20	40	450	950	500	650
Lofoden...	850	1,300	2,570	3,065	2,750	3,600
Nordland..	.....	.....	.....	.....	.....	.....
Finmarken	*	2,100	4,000	3,400	3,080	†

*Fishing not yet begun. †Unknown.

Soaps as a Vehicle for Medicine.

PURE soap alone is a valuable and convenient remedy for many affections of the skin, causing a softening and soothing influence pleasant to the feelings and the sight, besides exerting a healing effect in most cutaneous diseases; and from this softening property it causes any medicinal substance it properly contains to act more certainly, and with greater promptness, than perhaps any other vehicle that is at present known.

In adding a medicinal substance to soaps, some intelligence should be had to properly understand the character and compatibility of the several constituents of each, for there are many drugs that are not suited to mix with soap, that will not combine or are decomposed and changed by the alkali present in all soaps, and which is always present in slight excess, else it would not do proper duty as a soap; for though soaps are not truly soluble in water, yet their action in use causes an emulsion that has this softening action and pleasant effect, though it be washed away with more water, leaving scarce a trace of soap behind.

In making a medicated soap, the first care should be to have the purest and cleanest fats or oils that can be obtained, and also the best and purest alkali known, while great skill must be exercised in the making to insure a perfect combination, in fact, a thorough soap; and there are few ready made that can be recommended, as sophistication is now a common practice in the making of almost all the soaps of commerce. Having such a soap, the best means of combining the remedy is by means of the mill, for it can be added without heat, while the perfume if used can be combined at the same time. All colors as a rule should be avoided, unless the drug will give an unpleasant one; then to please the eye a color can be used, but care must be taken to have an inert or harmless color, compatible with the medicine.

The best and more suitable soaps for medicinal purposes are undoubtedly those made from vegetable oils, such as olive, palm, and almond oils, though mutton tallow would make a very suitable soap combined with any of the oils named; and if cheapness is desired, a little resin will not injure its healing qualities, but in some cases might prove beneficial, as it enters into many healing salves in the pharmacopœia. In using palm oil it should be previously bleached, as the natural color it contains is an objection; this oil is particularly applicable for medicated soaps, but as by itself it becomes too hard, it is well to add a nut oil or cotton-seed oil to give it plasticity.

It is impossible here to give all the formulas for the different medicated soaps, or in fact, even a list of the many substances that could be combined with soap to make such; yet I shall try and mention a few that I think are the most worthy. Thus for cosmetic purposes the juice of the lettuce and cucumber have a blanching effect on the skin; benzoin, tar, petrolatum, and carbolic acid give their healing properties to all soaps, and borax has a very softening influence. For disinfection, soap is a good vehicle for menthol and thymol, and other well-known drugs; in fact, with suitable intelligence the manufacturer

could make an endless variety of medicinal soaps, using the drugs in the proper proportion and making them all carefully. A mucilage of gum tragacanth added to all soaps for medicinal purposes causes them to be more emollient, and softens the skin.—*R. S. Cristiani, in Oil, Paint and Drug Reporter.*

Importation of Wines at Bordeaux.*

THE customs statistics for the first three months of 1883, compared with the corresponding period of 1882, give the following figures for the importation of wines at Bordeaux:

COUNTRIES.	FIRST QUARTER 1883.	FIRST QUARTER 1882.
	HECTOLITERS.	HECTOLITERS.
Spain	227,675	231,538
Italy	47,982	8,727
Austria-Hungary	12,000	6,600
Other countries.	115,919	69,502
Total	403,576	316,367

During 1882, owing to the high prices demanded, very little wine was brought from Italy. At present there is a decided increase in the importation of wines from that country.

Portugal, almost exclusively comprised under the title of "other countries," furnishes a large per cent of the wine imported, greatly to the disadvantage of Spain.

The importation of wines into France, and especially at Bordeaux, is steadily increasing. Bordeaux received during the first quarter of 1883, 221,468 hectotiters of French wines less than in the corresponding quarter of 1882. This is a great diminution, and shows how poor the last vintage was in quantity.

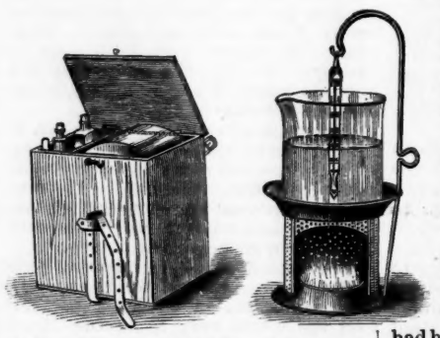
[We were recently informed that an American gentleman, being in Spain, took advantage of the occasion of a visit to Xeres to buy for his own consumption a quantity of sherry. Shortly after the purchase he saw at the railroad depot a number of casks of wine, which, on inspection, proved to have come from Cincinnati, Ohio, and bore the brand of a well-known wine merchant of that city.—ED. A. D.]

A Novel Adulterant of Scammony.†

A SAMPLE which represented a direct importation from Constantinople came into the author's hand for the purpose of analysis. It consisted of several small pieces which had apparently been broken from large, thick cakes, with the object of obtaining a representative specimen of the bulk from which they were taken. These were of an uniformly dark, ash-gray color, breaking easily and presenting a resinous, shiny, black fracture, indistinguable from pure virgin gum. Triturated in a mortar, the pieces were easily reduced to a buff-colored powder, somewhat darker than what is usually obtained from the virgin gum. This powder formed a very nice emulsion with water, and in other respects appeared quite satisfactory. To ether, it yielded 83.8 per cent of a nice, amber-brown resin, and a decoction of the residue, when cooled, was turned blue by iodine, as is usually the case with nearly all commercial specimens. The starch thus indicated was found by the microscope to be wheaten. So far nothing arose to create suspicion; but the resin obtained by the extraction with ether had a peculiar smell, which recalled the odor of the resin prepared from the root by means of alcohol, pharmaceutically known as scammony resin. Another portion of the sample was powdered and compared with a sample of true virgin powder, and at once revealed the presence of the resin prepared from the root. This resin will reveal itself by its very peculiar and persistent leathery odor, while the true gum possessed a quite as distinctive sour, cheese-like odor. There was no doubt that this parcel has been made up of some skillip scammony and resin prepared from the root.—*Chem. and Drug.*

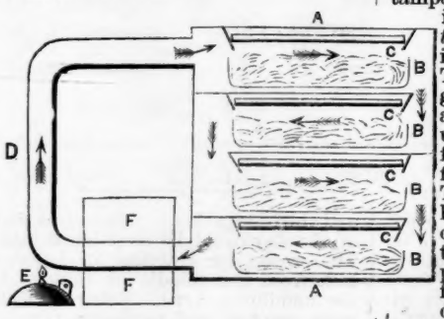
* Report by U. S. Consul Geo. W. Roosevelt, in United States Consular Reports, August, 1883, p. 335.

† Read by Michael Conroy, F.C.S., at the late Brit. Pharm. Conf.



SAVORY & MOORE'S PEPTONIZER.

THIS London firm of manufacturing pharmacists are offering a convenient apparatus for facilitating the peptonizing of milk, which needs no description beyond the illustration here given, which may also serve as a hint for some of our own manufacturers of druggists' sundries.



DRYING OVEN.

A SIMPLE form of drying oven, suited to pharmaceutical uses, is described in the *Photographic News:*

A, A represents a box or cupboard, with shelves placed alternately like baffle-plates; B, B, B, B, movable trays or dishes holding dried calcium chloride; C, C, C, C, the coated glass plates, resting in grooves, so that the gelatinous coating shall be directed downwards towards the calcium chloride; D, a bent tube, which is so heated by the lamp, E, as to cause the same air to circulate continually in the direction indicated by the arrows; F, F, a dotted space showing the position of chloride of calcium box in another form of the apparatus.

That form of the apparatus in which the trays containing chloride of calcium are replaced by a receptacle in the place indicated by dotted lines (F F) is especially effective, as in this case the air is desiccated just before it is heated by the lamp, an obviously advantageous arrangement.

Imitation Amber.—Roessler's recipe is to melt one part of rosin (colophonium), then add two parts, by weight, of shellac. When the mixture becomes sufficiently fluid, one part of white rosin, which should be clear as water, is then added.

Preservation of Medical Plants.*

BOTH the practising and pharmaceutical branches of the medical profession are agreed as to the advantages of fresh medicinal herbs over the same substances in a dried condition, and a simple process which would supply fresh herbs all the year round has long been a desideratum. The physician complains of the inferior physiological activity of the tincture made from the dried leaves: for example, tincture of hyoscyamus made from the fresh leaves will, if dropped into the eye, cause marked dilatation of the pupil; whereas the tincture made from the dried leaves causes no such reaction. He knew an instance where such tincture was returned with a query whether it was not tincture of belladonna. The late Mr. Donovan, of Dublin, had a tincture of digitalis which was much relied on. In making this tincture he brought the alcohol to where the fox-glove was growing, took the plant from the ground, bruised it, and plunged it into the spirit. He maintained that tinctures, to use his own words, "should be made from the live plant." The author doubted if ethylic alcohol extracted the virtues of all herbs; said that the manufacture of black drop had been revived in Dublin; wished that glycerin and alcohol had been ordered for the preservation of juices; and stated that green extracts strictly P. B. would not keep through the winter. A supply of herbs preserved in a practically fresh condition throughout the year would therefore be very valuable.

The herbs in a perfectly fresh state were bruised to a pulp in a mortar, and placed in glass bottles, well tamped down; the stopper was forced in so as to exclude *every particle* of air, and the top encased in beeswax softened by heat. The bottles were buried in the ground at a deph of three feet; and so treated, belladonna, conium and other herbs kept for four months perfectly sweet and fit for pharmaceutical purposes. The bottled herbs would probably keep for six or even eight months, or perhaps longer. Now and then a bottle will fail from imperfect manipulation, but the failure is at once rendered evident by the spots of mildew appearing in the vegetable.

The factors of the decomposition of vegetables were the putrefactive germs contained in the air, the actinic rays of the sun, heat, and moisture; and their comparative influence was shown by some experiments.

This method is indispensable for medicinal herbs which must be used in the fresh state, such as *Galium Aparine*, which is now much employed as a dressing for ulcers and cancers. It is bruised fresh, made into a kind of poultice, and placed upon the sore, but a bottle once opened, like a bottle of claret, must immediately be made use of.—*Chem. and Drug.*

Eruption from Chlorate of Potassium.

STELWAGEN records the case of a patient suffering from mucous patches of secondary syphilis for whom tablets of chlorate of potassium of five grains each were prescribed. Four days later a fiery, erythematous and papular eruption made its appearance over the back and neck. There were no subjective symptoms. The possibility of mercury having produced this eruption was carefully excluded. The eruption disappeared two days after discontinuing the drug, but reappeared on three other occasions, when the chlorate of potassium was administered for experimental purposes.—*Med. Record.*

* Abstract of a paper read by Prof. F. J. B. Quinlan M D., at the late Brit. Pharm. Conf.

German Paraffin.

It will be remembered that the new German Pharmacopœia directs paraffin ointment to be made by mixing liquid paraffin and solid paraffin. The latter was required by the Pharmacopœia to respond to such rigorous tests that no specimen found in the market at the time when the Pharmacopœia made its appearance would stand the test. Shortly afterwards, however, the efforts of the manufacturers to produce such articles were crowned with moderate success; and since then the products in question have been still further improved; so much indeed that they stand even more rigorous tests than the Pharmacopœia requires.

Prof. Flückiger reports that the liquid paraffin made by Carl Hellfrisch & Co., in Offenbach, has the spec. gr. 0.858 at 21° C. and has its boiling point higher than 360° C. When in contact with sulphuric acid of spec. gr. 1.840, at the temperature of the water-bath, for several days, and frequently shaken, it assumes a tint which can only be called yellowish, but scarcely brownish.

The solid paraffin of the same firm does not melt under 80° C., has spec. gr. 0.918 at 18.75° C. and resists the action of sulphuric acid as well as the liquid paraffin.—*Pharm. Zeit.*, No. 48.

COLCORD'S BOTTLE-TAP.

This appliance, invented by Mr. J. W. Colcord, of Lynn, Mass., is a decided improvement upon the various taps heretofore in use. It consists of a threaded tube, provided with a gimlet-pointed tip, which facilitates its introduction through the cork, but which, when once through the cork, drops to the bottom of the bottle, or is pushed out by the draft-tube. The draft-tube passes through a rubber packing at the top of the threaded tube, and has a stop cock which controls the escape of the contents of the bottle. Attached to the side of the threaded tube by means of rubber tubing is an air-ball with valves, which enables the pressure in the interior of the bottle to be kept up to any degree requisite. The improvement upon other taps consists in the fact that the draft tube can be pushed to the bottom of any ordinary bottle. The bottle can always stand on its base and does not require to be held bottom upward, while the contents are being drawn; thus enabling the glass to be held instead of the bottle. There is no risk of loss of gas from careless opening of the tap, while the bottle is erect. Moreover, with other styles of taps, it is the gas filling the space above the fluid which exerts the pressure requisite to drive out the contents, and all the gas thus liberated from the beverage correspondingly lessens the amount contained by it. Oftentimes this deprives the beverage of just the element which renders its use desirable. When the contents of a bottle have been cooled to render it more agreeable, the expansion of its gas is considerably lessened and may not be equal to the force required for its expulsion. All these difficulties are avoided in this tap here described. The pressure is always under control, and may be made sufficient to hold the carbonic acid in the liquid, thus maintaiaing its properties until the last is used.

The Way to Study Prescriptions.

"Two precautions will greatly limit waste of time over studying prescriptions. The first is never to learn a prescription excepting in connection with the study of some particular disease or symptom, and as far as possible to augment such study by an interest in some particular case, neglecting even, sometimes, routine work to learn all about a case which offers itself to the notice. The second precaution is to make the personal acquaintance of each drug and chemical before learning to write for it. After having dissolved a teaspoonful of chlorate of potash in a tumbler of water, it is easy to learn to write a prescription for the same, and the subject of materia medica would be shorn of much of its difficulty if a little time were occasionally taken from the note-book to be spent in the drug-store, or in mixing at home the drugs bought by the student, if only to be thrown away. Time and money spent in this way are not wasted, and a few prescriptions, first met with in a medical journal, and then studied in this practical way, will remain in the memory when the hundred in the note-book shall have been forgotten."—Editorial in *Boston Med. and Surg. Journal.*

Paper Gas Pipes.

These are made by passing an endless strip of hemp paper, the width of which equals the length of the tube, through a bath of melted asphalt, and then rolling it tightly and smoothly on a core, to give the required diameter. When the number of layers thus rolled is sufficient to afford the desired thickness, the tube is strongly compressed, the outside sprinkled with fine sand, and the whole cooled in water. When cold, the core is drawn out, and the inside served with a waterproofing composition. In addition to being absolutely tight and smooth, and much cheaper than iron, these pipes have great strength; for, when the sides are scarcely three-fifths of an inch thick, they will withstand a pressure of more than fifteen atmospheres. If buried underground, they will not be broken by settlement, nor when violently shaken or jarred. The material being a bad conductor of heat, the pipes do not readily freeze.

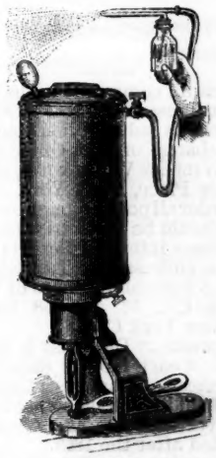
Herniaria Glabra in Cystitis.

Herniaria glabra, besides being of benefit in acute cystitis of the neck of the bladder, has been used successfully in chronic cystitis, and in the bladder and urethral troubles attendant upon certain conditions of the womb and vagina.

It seems also to possess an important preventive action in cases of gonorrhœa, *i. e.*, it limits the inflammation to the anterior portion of the urethra, and renders less liable the extension of the disease to the deeper part of the urethra and appendages, and the bladder. It has been used by one physician in thirty cases of gonorrhœa, and in none of these cases has the inflammatory action passed deeper than is ordinarily found in a simple case of this disease. This preventive action will, as a matter of course, render far less probable that disagreeable but common accompaniment of gonorrhœa, epididymitis.—*Cin. Lan. and Clinic.*

Poisoning by Citrate of Caffeine.

The Practitioner gives the report of a case where the patient took ʒi. of citrate of caffeine in powder, which was dispensed by mistake for Bishop's effervescent preparation. In fifty minutes, he complained of burning in the throat and giddiness, with vomiting and purging, and abdominal pain. The intellect was clear, though he was almost paralyzed and trembling; pulse 120, and patient in a state of collapse. Animal charcoal, nitrite of amyl, and ether finally produced vomiting, which was followed by the administration of one-minim doses of nitro-glycerin with digitalis. At the end of nine hours he came out of the collapse and recovered in three days.



BURGESS' AIR-COMPRESSOR.

In April, 1880, we described an apparatus for compressing air so as to furnish a steady stream under a pressure of five to fifteen pounds to the square inch, such as is required for blow-pipes, filter-pumps, atomizers, and a variety of work about laboratories and physicians' offices. Through the kindness of Mr. J. Elliot Shaw, 154 So. 4th street, Philadelphia, the maker of these compressors, we have had an opportunity for examining a recent modification of the apparatus wherein its usefulness is considerably increased. As will be seen in the adjoining illustration, it consists of a short pump, worked by a foot-treadle, which forces air into a stout metallic reservoir. Less than a minute suffices to give a pressure of ten pounds to the square inch, and a pressure-gauge is arranged so as to indicate any degree from one to twenty pounds. The reservoir is strong enough to resist a greater pressure than can be attained by the pumping apparatus, as ordinarily used. To prevent leakage when the reservoir has once been filled, a stop-cock (seen, in the illustration, below the reservoir), can be closed; and with a pressure of ten to twelve pounds, there will be air enough in the reservoir to keep up a spray, with a good atomizer, for ten minutes. A handle on the top of the air-chamber enables the apparatus to be moved from place to place. The whole weighs but twelve pounds, and costs somewhere in the neighborhood of $18.00. This is much cheaper than the other forms of air-compressors in general use, and it seems to be equally durable and far more efficient.

THE

American Druggist

(NEW REMEDIES)

AN ILLUSTRATED MONTHLY JOURNAL

OF

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FRED'K A. CASTLE, M.D., - EDITOR.
CHAS. RICE, PH.D., ASSOCIATE EDITOR.

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The AMERICAN DRUGGIST is issued on the 25th of each month, dated for the month ahead. Changes of advertisements should reach us before the 10th. New advertisements can occasionally be inserted after the 18th.

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EDITORIAL.

Ourselves.

IN accordance with our announcement last month, several important changes have been made in the form and arrangement of this journal, which, it is believed, will increase its value to all who are connected with it. The first of these alterations, and the one which will probably first attract attention, is the change of name.

Rather more than twelve years ago, when the journal was first issued, the attention of physicians and pharmacists had been but lately directed to the discovery of several new and valuable medicinal agents. The study of therapeutics, which for many years had languished, owing to the activity of research in the field of pathology, began to receive a greater share of attention, and the opportunity arose for a magazine which should give a quarterly summary of advances in pharmacology. After more than four years of existence in this form, during which time numerous medical journals came into existence throughout the United States, and articles on therapeutical subjects were more generally published, NEW REMEDIES became a monthly, and gradually omitting all but the more important matter relating to therapeutics, increased, in the same proportion, that relating to pharmacy and medical chemistry. At the time of this change to a monthly issue, there existed in this country but two other journals relating in any considerable degree to pharmacy, and the success which at once followed the adoption of the new form was sufficient evidence of the need for just such a magazine as was then offered to the drug trade. This success was so evident in the case of NEW REMEDIES that it is doubtless one of the reasons for the rapid development of pharmaceutical journalism in this country during the past ten years, so that now there is no country in the world whose pharmaceutical literature is more widely read or more highly esteemed.

As time passed, the title NEW REMEDIES became to some extent a misnomer, for while due attention has been given to the very numerous novelties in materia medica, much more space has been devoted to writings upon newly-discovered properties of *old remedies* and to the correction of false information respecting the nature and uses of things already more or less familiar to pharmacists and physicians.

Moreover, it may be said that, owing to the adoption of the title "NEW REMEDIES" by certain dealers in drugs in this country and abroad, as a heading for their advertisements, there has been, among a certain number of persons, an impression that the journal is published in the interest of one or another enterprising drug firm. Those who are in the least degree familiar with its contents need not be told that this has never been the case. Again, pharmacists who have reason to look with no pleasurable emotions upon the "new remedies" which they have been induced to purchase on the strength of one or two physicians' prescriptions, but which have since stood uncalled for on their crowded shelves, can hardly be expected to favor a publication which, by its title, seems to promise only additional occasions for emptying their pockets and still further increase their stock of comparatively useless wares; and it may readily be presumed that the journal has thus far flourished in spite of its title rather than on account of any confidence it may have inspired.

The new title will be entirely in accord with the spirit of the text, which in the future, as in the past, will aim towards the education of its readers and the advancement of the best professional and commercial interests of the druggists of this country.

Next, as to its size. It is a matter of experience with publishers that for the purposes of advertisers a certain size of page is most desirable. When pages are small they necessitate the use of less matter or the employment of additional pages; both alternatives being more or less objectionable. On the other hand, a journal which exceeds a certain size becomes awkward for the reader and occupies too much space to admit of its being kept on the ordinary book-shelf. It has been the intention of the publishers of the AMERICAN DRUGGIST to avoid extremes and to adopt a size of page which will permit the displaying of matter, such as may be found in our advertising pages, and at the same time enable the journal to be held by the reader in one hand, or laid upon its side on a shelf without overlapping the edge of the latter so far as to risk falling or obscure whatever may be placed on a shelf below. Another advantage in the size of page selected is the opportunity afforded for arranging illustrations. Not unfrequently it happens that illustrations must be rejected because they cannot be conveniently, or without considerable expense, reduced to the limits of a small page, or that the illustrations of an article have to be placed on succeeding pages because there is not room enough on one, and reference and comparison of parts is thereby rendered more troublesome.

Some years ago the type used was long primer and brevier, but for the sake of gaining space for more matter, the use of the former was abandoned, and brevier alone was used. In making the new changes, the size now adopted is between the two, viz., bourgeois, and an entirely new supply of type with a large face has been specially procured for the purpose.

Although the number of pages has been reduced to twenty in each issue, it will be found, by careful examination, that, owing to the increase in the size of the page, the amount of matter has also been somewhat increased.

The above estimate does not include the reading matter on the advertising pages, which, if added to the text of the journal proper, doubles the reading matter in each number.

Aside from the advantage accruing to advertisers from having their notices adjoining reading matter, the introduction of this novel feature of the AMERICAN DRUGGIST is not without its interest for subscribers. It may be said here that this additional reading matter is not intended to be considered as coming strictly within the text of the journal proper, but at the same time it is intended to supply, in this department, items of general or ephemeral interest, to be preserved or not, as the subscriber may choose.

Another feature of this journal is the number and variety of illustrations. Since its introduction there have been few medicinal plants or pharmaceutical appliances of notable value which have not been illustrated in its pages, and this feature continues to be one which distinguishes it from all other journals of its class.

There is always a limited number of readers who fail to see in a large advertising patronage controlled by a journal, any advantage for themselves, but are inclined to find fault in proportion as the advertisements increase.

If this increase were secured by correspondingly reducing the reading-matter, there might well be reason for such dissatisfaction; but when, on the contrary, the number of pages of text remains the same, the addition of advertisements serves as a source of revenue whereby the character of the text can be improved. This is true of all journals, the ones ranking highest in excellence being, as a rule, the ones which are most largely patronized as advertising mediums; and it is likewise true that it is only such as possess a large advertising patronage that can afford, for any considerable time, to incur great expense in improving the quality of reading matter, or in paying for expert work.

As it is, counting the entire amount of reading matter in each issue, there is no druggist's journal in the world which furnishes anything like the same amount of reading matter, or which costs the subscriber so little, as the AMERICAN DRUGGIST.

Respecting the future we have rarely made promises, feeling that the course of the journal in the past and the fa-

vor with which it has been received, both at home and abroad, should serve as a sufficient guarantee of its merits. Numerous letters of approval from subscribers and advertisers have been received, but have never been published, because we have believed that the journal should speak for itself. Such letters are, however, highly gratifying to both the editors and publishers, and when accompanied with friendly criticism and suggestions calculated to increase the value of the journal, are doubly acceptable. We shall also welcome, at all times, the receipt of communications on topics of interest to druggists, whether they relate to the scientific or commercial phases of the trade, and shall spare neither labor nor expense to illustrate whatever may be capable of such treatment.

Especial pains will always be taken by the Editors to answer queries relating to subjects coming within the province of the journal, and druggists and their employees, who meet with problems at the prescription counter or in the manufacturing department, will confer a favor upon the trade generally by sending them, with such comment as they please, to the "Queries" department of the AMERICAN DRUGGIST.

Manufacturers and inventors who have novelties of interest to the drug trade, are always welcome to the gratuitous use of our columns, providing the wares are not secret and that they have not already been noticed or advertised elsewhere.

In conclusion, we wish our readers and patrons, Long Life, Prosperity, and a Happy New Year.

"Join or Die."

DURING the closing period of the revolutionary war, when independent States were contending for "State Rights," and the formation of a stable federal government seemed to be imperilled, a flag appeared which bore in its centre a serpent divided into thirteen parts, and above it the motto, JOIN OR DIE. The motto became a rallying-cry, and before many months had passed, the confederation of the thirteen States was accomplished.

This preface may serve to introduce a communication from Geo. J. Seabury, which lately appeared in our esteemed cotemporary, the *Weekly Drug News*, in which the writer suggests a remedy for cutting prices of proprietary articles in the drug trade. The suggestion is by far the best one that has yet been offered for the consideration of pharmacists in large cities, where the evil is, as yet, the greatest. There is no doubt, as the question now stands, that something must be done, or fully half of those now engaged in the business of selling drugs and medicines must turn their energies and capital into other channels in order to earn a livelihood. Pharmacists must, in fact, "Join or Die."

The plan proposed is as follows: An association of pharmacists is to be organized in New York, with stock to the amount of $10,000, in shares of $10 each, to be taken by its members. A store is to be occupied as near as possible to each pharmacist who is known to be a "scalper," and placed under the management of a committee with power to regulate prices and purchase goods. The "scalper's" prices are to be systematically "cut" in the association stores, perambulatory placards are to be kept on the blocks adjoining, day and night, and every honorable means is to be used to induce the public to patronize the association stores in preference to those of the offending pharmacists. No matter how much the latter may reduce prices, the association stores are to go still lower, and corresponding goods are to be given away, if need be, together with a tract which teaches the effects of reckless business methods upon legitimate trade. It will be but a question of time how long any private dealer can continue the warfare, and in the end he will be compelled, sooner or later, to accede to the terms of the Protective Union.

To render the "scalper's" career more brief, it is also proposed that manufacturers shall be solicited to furnish goods at specially low rates to the association store, and to refuse them, at any price, to the offending dealer. The advantage that would accrue to the manufacturer in assisting to stop the cutting by independent stores is so evident that no difficulty is likely to be encountered in this direction. When, at last, the object has been accomplished, and the "scalper" has been convinced of the error of his way, the association store can be closed.

The proposer of this plan gives, in some detail, figures which show that such united action is the only course which can save the retail trade generally from great financial losses, and that its cost is so much below the prospective losses, in case the present condition of affairs continues, that it is really trivial in amount.

National College of Pharmacy.

THERE is trouble ahead for the National College of Pharmacy, in Washington, D. C. The College having admitted, as a pupil, Mr. O. M. Atwood, a colored man, all but eight of its class of forty-six students rose in a body, and, under the leadership of the president of the college association, left the hall.

This, we believe, is the first time in the history of pharmaceutical education in the United States where sex or color has been made a basis for discrimination as to who should have the advantage of education in pharmacy, and in this instance, be it observed, the college authorities are not at fault.

It is asking a great deal of those who control the school that they should refuse to accede to the demands of the seceding students, and it is an additional source for regret that such an affair should have occurred in the capital of a nation that recognizes no distinction of race in civil rights—that is to say, it was so before the *hoodlum* decided that "the Chinese must go."

We hope, however, that no concession will be made to such a spirit as these thirty-eight students have shown, and that the College will be able to convince them by fair argument and moderate action that *civil* rights and *social* rights are quite different matters, and that their course is utterly unworthy of honorable gentlemen.

Articles Sold in Drug Stores.

"THE Druggists' Pocket Price Book," just issued, by Mr. Benjamin Lillard, is supposed to contain most of the more important articles sold by the trade in this country. Some seven thousand items are named, of which the two largest letters are P and S, each having 1,476 lines or 41 pages. Next are B, C, and E, with over 1,000 in each. The remainder are comparatively small, excepting T, with 648, L, with 504, and O and R, each with 468 lines.

About 300 kinds of ready-made pills are mentioned, showing this to be the most popular form of taking medicine. Next come plasters, ointments, and elixirs, each 100. Also 90 kinds of liniments, 75 lozenges, 20 troches, 30 capsules, 40 salves, and 15 teas. There are 65 acids, 60 essences, 140 fluid extracts, 100 solid extracts, 200 oils, 100 powders, 30 solutions, 160 syrups, 140 tinctures, 70 waters, and 60 wines. Vegetable products comprise 130 roots, 70 herbs, 60 barks, 50 gums, 45 seeds, 40 leaves, and 25 flowers. Minerals are represented by 45 compounds of iron, 40 of magnesium, 40 potassium, 80 sodium, 20 mercury, 17 zinc, and 13 of copper.

Toilet articles include 100 varieties of soap, 100 perfume extracts, and 25 colognes, and 45 kinds of paper are used in various ways.

The most popular forms of patent medicines (not including those in pills, elixirs, lozenges, liniments, etc.) are cures, of which there are 60; next come 50 balsams, 48 remedies, 37 bitters, 28 foods, 26 tonics, 24 cordials, 21 drops, 20 restorers, 18 cigarettes, 16 sarsaparillas, 13 hair dyes, and 11 pads.

Among the odd articles sometimes sold by druggists are axle-grease, artificial eyes, bath brick, bladders, bathtubs, cock-roaches, candles, coffee-pots, cushions, cigars, crutches, diapers, dice, fertilizers, fire-crackers, fishing tackle, garlic, ginger-bread nuts, games, goggles, gun-powder, hones, Indian clubs, insoles, jewelry, lanterns, lenses, magnets, marbles, matches, muslin, necklaces, oatmeal, pillows, pins, portfolios, postage stamps, putty, rabbits' paws, rattles, razors, reels, rockets, rods, sawdust, sheeting, shot, slates, spectacles, stockings, tacks, thimbles, tidies, torpedoes, towels, tumblers, watches, and wadding.

Gombault's Balsam.

SINCE our forms were ready for the press, we are in receipt of the following correspondence from Mr. S. S. West, of Cleveland:

In your December number, under "Formulæ and Information Wanted," the formula for "Gombault's Balsam" is asked for. Being familiar with certain circumstances, I will say, Mr. M. J. Lawrence, of the firm of Lawrence, Williams & Co., of Cleveland, O., some four years ago proceeded to Paris, France, to purchase the formula of the balsam from Mons. J. E. Gombault (ex-veterinary surgeon of the French Government Stud), and he informed me he offered a fabulous price for it, but all to no purpose; it could not be obtained, and so closely is the formula guarded that Mons. Gombault prepares it himself only, and is so cautious that even his employés do not know the composition of it. Mr. Lawrence, however, purchased the sole control of the article in the United States and Canada, and has it shipped to him from Paris in large iron drums, holding from sixty to seventy gallons, and bottles it for sale. Therefore I think it scarcely worth while to look up its composition, as in all probability it cannot be obtained.

National Retail Drug Association.

WE have reserved for this issue the circular of the Executive Committee of the National Retail Drug Association, which our readers will find on pages 77 and 79 of the advertisements.

SINCE our last number was issued, Michigan pharmacists have effected an excellent State organization, and we may next look for a model pharmacy law.

THE second annual exhibition of bottlers' supplies, machinery, etc., which is to be held in the building of the American Institute, on Third ave., between 63d and 64th sts., in this city, on the 11th, 12th, 13th, and 14th of December, will undoubtedly be one of the most interesting displays of the kind that has ever been made.

THE Retail Drug Trade, having aided the manufacturers to secure the repeal of the stamp tax on proprietary medicines and perfumes, find that the prices of these articles remain the same as before, and that the only persons who have derived any advantage from the proceeding are the said manufacturers.

Practical Hints for Making Cider and other Fruit Wines.

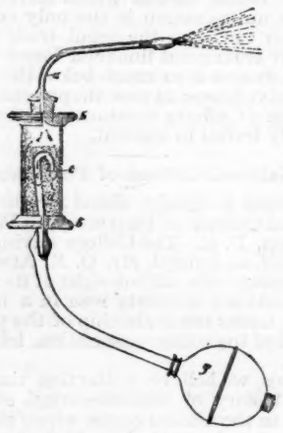
If the cider or fruit-wine is intended for sale, particular care must be taken to remove every trace of rotten fruit, which always causes a disagreeable taste and eventually produces a cloudiness. If hard fruits are to be worked, it is best to let them lie for some time, until they become softer, when they may be more readily comminuted and expressed. The contact with iron is to be avoided as much as possible; at least no iron tool or nail must be allowed to be long in contact with the fruit or the expressed liquid, as it is thereby rendered green, gray or black. A superior product is obtained if the fruit is thoroughly comminuted, particularly if crushed. Some mills are so constructed that they only tear the fruit in pieces. If carefully used, troughs with revolving mill-stones are preferable to many of the mills sold in the market. If the fruit was sound and fresh, it is generally preferable to let the crushed mass stand for one or two days, before expressing; stirring, and mixing it occasionally, and carefully covering it to exclude the air as much as possible. If water is to be added, this should be poured upon the expressed residue, and allowed to remain for twenty-four hours, when it should be separated by pressure. For every hectoliter (26¼ gall.) of water thus added, about twenty pounds of white sugar must be added to the must if the product is to keep well. It is much better to add sugar before the process of fermentation sets in, than to add brandy or alcohol afterwards. The sugar is of course partly converted, during the fermentation, into alcohol.

Should the must, after a few days, not be in active fermentation, some well-crushed, thoroughly sound fruit (apples, pears, etc.) is to be added to the cask (one-half pailful for each hectoliter) and allowed to remain until the fermentation is over. If the cask is not quite full, the access of air or rather the renewal of the air over the liquid must be prevented as much as possible, by covering the bung-hole with a bag of sand or other suitable material. If a fresh lot of must can be poured in, so as to fill the cask, during the ensuing ten or twelve days, there will be but little danger of acetic acid being generated. It is a risky matter to let must remain longer than ten or twelve days in a partly filled cask; acetic fermentation usually occurs in this case.

As soon as the principal fermentation slackens, and the larger portion of the yeast has deposited, the must is let off into a well-cleaned and slightly sulphured cask (fumigated with a very small piece of sulphur). If the must, after a while, is found no longer to ferment, two pounds of best sugar are added. The cask is to be kept as full as possible, and when the fermentation is complete, to be well bunged. Long bungs, dipping into the must even when the cask is not quite full, are better than short ones.

If it is desired to make a good deal of must from a small quantity of fruit, for home use, this may be done in the following manner. The well-crushed fruit (say about 200 pounds) is mixed with sugared water (30 pounds for each hectoliter, or 26¼ gall.), allowed to stand four days with occasional stirring and being well covered, and then expressed. The residue is now again mixed with water (50 liters or 13¼ gall.), let stand two days and again expressed. The liquids are mixed and treated like other must. Of course, this watered liquid is not intended for sale as genuine must.

Sparkling cider is made by proceeding as above stated, then putting the must, when it has fully fermented and become clear, into bottles containing, each, a little sugar, and allowing them to lie. It is important to use the proper amount of sugar; if too little is used, the product does not effervesce sufficiently; if too much is taken, the secondary fermentation is so strong that many bottles will burst. This latter also happens usually, if unfermented must is filled in bottles. For an ordinary champagne bottle, 10 grammes (154 grains) of sugar may be taken. It is best to proceed as follows: Dissolve 400 grammes (14 avoir. ounces) of sugar in enough water to make the solution measure one liter (34 fluid ounces). Into each bottle pour about 25–30 cm. (say one fluid ounce) of the solution, and fill up with must. For sparkling cider only such must as contains but a trifling quantity of acid, can be used.—*J. Nessler, in Ind. Bl.*, 20, 188.



A NEW POWDER BLOWER.

A new powder blower, made by J. U. Lloyd, of Cincinnati, after the suggestion of Dr. E. E. Sattler, is described in the *Lancet and Clinic*. It is intended for the application of boric acid, iodoform, salicylic acid, alum, etc., in powder, to the throat, ears, nasal and other cavities. The illustration renders a long description unnecessary; it will suffice to say that compression of the elastic bulb fills the chamber with a cloud of powder, which is then expelled with considerable force through the nozzle.

Action of the Extract of Guachamaca.

M. Schipper (Idene) thinks that in this extract he has found a substitute for curare, having all its properties without presenting any of its dangers.

The guachamaca belongs to the family of the *Apocynaceæ;* the ac ive principle is to be found in the bark. The extract is dark brown, resinous, it is slightly soluble in water, but not at all in absolute alcohol or ether. There exists a great resemblance between the physiological effects of this substance and those of curare. These effects were produced in frogs by injecting 10 milligrammes of the dry aqueous extract. The only differences between the action of this substance and curare are the following:

1. It affects especially the muscular system, although the respiratory muscles continue their action.

2. The nerve-centres are early affected, while curare affects them tardily. Again, contrary to the affects of curare the extract of guachamaca introduced into the stomach of chickens and dogs poisoned them in very minute doses.

Ten milligrammes of the dry extract injected into the skin of a man caused, as local phenomena, a slight phlegmonous œdema in the vicinity of the puncture, and, as general symptoms, there was at first a light sleep, then more profound, lasting from two and a half to three hours without further results, and slight spasmodic contraction of the muscles. The respiration or circulation was not affected.

Panklastit.

This is the name of a new explosive, composed of disulphide of carbon and hyponitric acid, which latter is produced by heating nitrate of lead. It can be ignited by fulminate or gunpowder, but not by a blow or by heating to 200° C. It is said to be more powerful than dynamite.

The mixture burns in the air with a brilliant white light, and may be used for illuminations; it is then called "selenophanit." For this purpose, it is best to allow both liquids to flow through narrow tubes, each separately, into a dish used as burner, which must be properly cooled. The luminosity of the mixture is greatly augmented by dissolving a little phosphorus in the bisulphide; in this case, it is called "heliophanit."—*Chem. Centralbl*, xiv., 558.

Dried Moss as a Dressing.

Dr. Hagedorn, of Magdeburg, has for six months employed, with the best results, freshly-dried swamp moss as a dressing in nearly all his operations and wounds. During the winter, he took it from under snow and ice, dried it, and let it remain in an oven, at a temperature of 105° to 110°, for an hour. Moss thus dried may be used without further disinfection as a pillow of any form or size. Other advantages claimed for it are that it allows of perfect drainage, is readily kept pure, does not require frequent renewal, and he has never seen erysipelas or septicæmia follow its use. The moss should be shaken in a coarse gauze before use in order to remove rough particles which would irritate the skin. —*Med. Neuigk.*, July 14th, 1883.

Detection of Sugar in Urine.

The following method for the detection of sugar in the urine, by means of test-papers, has been devised by Dr. Oliver: The test papers are charged with the carmine of indigo and carbonate of sodium. When one is dropped into an ordinary test tube, with sufficient water to cover it, and heat applied, a transparent blue solution results. If with the paper one drop of diabetic urine has been added, shortly after the first simmer a beautiful series of color changes appear; first violet, then purple, then red, and then straw-color, while, on the other hand, one drop of non-diabetic urine induces no alteration of color. The colors return in the inverse order on shaking the tube, which allows the air to mingle with the fluid. Reheating restores the colors. If now a mercuric chloride is dropped in, a blackish-green precipitate is obtained. No such precipitate occurs when non-saccharine urine is under examination. Dr. Oliver claims that Moore's, Trommer's and Boetger's tests are all inferior in delicacy.—*Brit. Med. Journal.*

Solid Alcohol.—A French chemist, by liquefying ethylene (olefiant gas) and then causing it to boil, produced a temperature of −157° Fahr. By holding liquid ethylene in a vacuum, another experimenter succeeded in producing the rather cool temperature of −212¼° Fahr. In this latter temperature alcohol and bisulphide of carbon were congealed, and oxygen and nitrogen reduced to liquids. Solid alcohol becomes whitish, liquid oxygen transparent, colorless, and ozone deep blue.—*Scientific American.*

Decomposition of Iodoform and Calomel by Light.

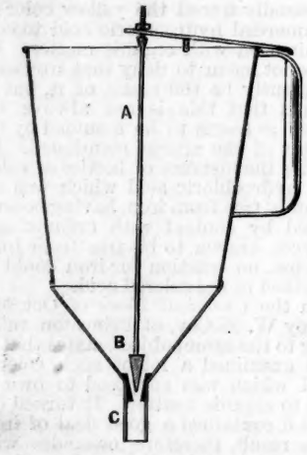
MR. S. J. BENDINER, of New York, points out that a mixture of iodoform and calomel—such as is not unfrequently prescribed by physicians as a dusting-powder for syphilitic sores—is more or less affected by light, even when the chemical rays are excluded, and at ordinary temperatures. When heat is applied to the mixture, in a test tube, the decomposition takes place more rapidly, with evolution of the vapor of chloroform and hydrochloric acid gas, which latter strongly reddens litmus paper introduced in the upper part of the test-tube.

As an explanation of the reaction, the author cites the behavior of mercuric chloride towards iodoform mentioned in Flückiger's Pharmac. Chemie. When these substances are brought together, iodo-chloroform, a substitution product of chloroform, is produced, which is almost identical in odor with the latter:

$$CHI_3 + HgCl_2 = HgI_2 + CHCl_2I$$

Iodo- Mercuric Mercuric Iodo-chloroform. chloride. iodide. roform.

A similar reaction probably occurs with mercurous chloride.—*Pharm. Rundschau* (Hoffmann's), 1883, 245.



HIRES' BOTTLE-FILLER.

THIS is a simple and efficient apparatus for filling bottles without waste, and is adapted to a great variety of uses. It consists of a conical vessel of heavy tin (A) with an orifice of brass (C) into which a conical brass plug (B) is closely fitted by grinding. This valve is raised and lowered by means of a wire which plays somewhat loosely through one end of a lever, adapted to be pressed by the thumb of the hand holding the filler. A spiral spring attached to the fulcrum of the lever keeps the valve closely pressed into its seat when the thumb-piece is not depressed. There is nothing about this filler to get out of order. It can be cleaned as easily as an ordinary funnel, by unscrewing the nut and removing the valve and rod. It is provided with two smaller nozzles to permit of filling small vials, and these are screwed, when not in use, into the under side of the handle. There is also provided a wire tripod for holding the filler erect and enables it to be set down without spilling its contents. It is made by Charles E. Hires, of 48 N. Delaware avenue, Philadelphia, and is sold for $1.50 (and 15c. for postage) each, or $17.00 per doz. Special kinds are made for mucilage, paint, varnish, or other thick liquids. Those who have need of a small bottle-filler can find nothing better.

Improvements in Burettes.—Dr. Tschirsch announces (*Pharm. Zeitung*) that Dr. Robert Muencke, of Berlin, has introduced burettes with a streak of milk-glass on the side opposite the graduation. Upon this background the divisions of the scale become very prominent and sharp. If an Erdmann's float be used at the same time, it is possible, in burettes graduated in $\frac{1}{10}$ *cc.* to read off as small a quantity as $\frac{1}{30}$ to $\frac{1}{40}$ *cc.*

Glycerin as an Excipient.

THE use of glycerin as a solvent in pharmacy, in the place of lard or oil, is opposed by Vigier, who calls attention to the fact that glycerin does not penetrate the skin, and is therefore a poor excipient for drugs that are to be absorbed. For the same reason, it is especially applicable where the systemic effect is undesirable, as in the use of mercuric chloride as a parasiticide, the glycerin combination being preferable to the ordinary officinal ointment, some of which is necessarily absorbed. True fatty substances are therefore required as vehicles for remedies that are to be used by inunction, while glycerin ointments may be employed where a local effect only is sought after.—*Rundschau für Pharmacie*, vol. ix., 224.

Flavoring for Soda Water or "Pop."

VARIOUS flavors are used, principally lemon and sarsaparilla. For the first, a lemon syrup is made as follows: Simple syrup, 1 gallon; extract of lemon, half an ounce; fruit acid, 1 ounce. For sarsaparilla syrup, the following is the formula: Oil of anise, 15 drops; oil of wintergreen, 15 drops; oil of sassafras, 15 drops; fluid extract sarsaparilla, 2 ounces; simple syrup, 5 pints; powdered extract licorice, half an ounce. A sufficiency of the syrup is mixed with the water, and the whole is then charged with gas.

Gilding and Silvering on Wood.

THE wood must be coated with size. To make this, boil half a pound of parchment shavings with three quarts of water, constantly stirring. This gives a clear solution of gelatin, which must be passed through a sieve. Paint over the wood with this, and, while it is still moist, apply gold or silver leaf, or Dutch metal. Much manual skill is necessary, and it is well to see the exact details practised by a gilder. Wood may also be gilded by mixing bronze powder with copal varnish, and painting it with the mixture. Finally, gold paint may be bought all ready for use, and this will probably give the most satisfaction.

Quick Drying Furniture Polish.

THE following will dry in a short time: 4 ounces of shellac is dissolved in 2 pints of strong alcohol; to this is added 2 pints of linseed-oil and 1 pint of spirits of turpentine. When mixed, add 4 ounces of common ether and 8 ounces of ammonia water. Apply with a sponge. For French polishing, shellac varnishes are often used. The following is good: Shellac, 2 pounds; mastic and sandarach, of each 1 ounce; copal varnish 12 ounces; alcohol, 1 gallon. Make in the cold, in a stoppered can or demijohn, and do not filter. This is for use in French polishing, which involves application with a rubber.

Paste or Glue for Paper-Labels.

(SAID to make a first-class mucilage for gumming large sheets of paper which may be kept for use without curling, and stick well on glass or other substances, when wet):

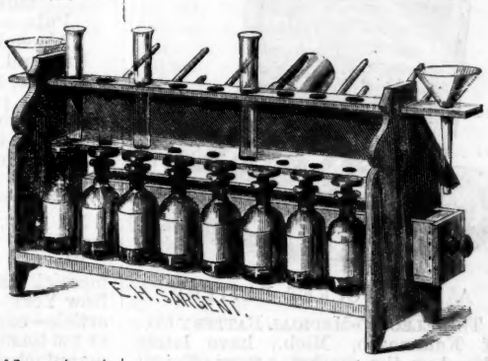
Starch	2 drachms.
White sugar	1 ounce.
Gum arabic	2 drachms.
Water	q. s.

Dissolve the gum, add the sugar, and boil until the starch is cooked.

Try also the following, said to be that used on postage stamps: Gum dextrin, 2 parts; acetic acid, 1 part; water, 5 parts. Dissolve in a water bath, and add alcohol, 1 part.

To Clean and Polish Cows' Horns.

RASP the horn with a file, to bring it to a smooth, even surface; then scrape with glass, in the same manner as a shoemaker scrapes the soles of boots, This, if carefully done, will leave a fine. clean surface. Then rub with a piece of cloth and "electro-silicon;" wet to a paste with water. Then polish with a cloth and oxide of tin, wet with water to a paste. Sometimes the horn is rubbed down for a final polish with French polish, instead of the oxide of tin. Whiting and chalk in water is also used.



SARGENT'S TEST STAND FOR URINE ANALYSIS.

THIS compact and complete apparatus devised be Prof. E. H. Sargent, of Chicago, will be found a convenient and inexpensive device for the examination of urine, economizing time and labor; it is ready for use at any moment, and occupies the smallest space which could be used for the purpose.

It consists of a wooden stand, with nine holes for test tubes, eight glass-stoppered reagent bottles, two glass funnels (each having a rest at end of stand), two beaker glasses, brush, glass rod, pipette, nine test tubes, and a urinometer, with the proper reagents, litmus paper, etc., complete. A drawer slides behind the bottles for holding test paper, brush, etc.

A rack of pins on the back of the stand affords room for drying beakers and test tubes.

Price, complete with reagents, $5.

A New Insecticide.

THE aqueous or acetic acid infusion of the flowers of *Delphinium Ajacis* is used as an insectide. In consideration of its extreme cheapness and by its lack of odor, it is distinguished from other known agents. According to Benvenuti, the action of *Delphinium Ajacis* is as an excitant, rubefacient, astringent, and antizymotic. In many cases, this remedy shows a great resemblance to carbolic acid and with iodoform.—*Archiv der Pharmacie.*

Indelible Stamping Ink.

ACCORDING to Reissig, stamping-ink for marking or cancelling stamps, documents, etc., which cannot be entirely effaced, may be prepared by mixing 6 parts of finest lamp-black with 2 to 3 parts of ferric chloride and 16 parts of boiled linseed oil. When thoroughly mixed, the whole is diluted with

about one-eighth of its volume of boiled linseed oil. This ink should be used only with rubber-stamps, since metallic stamps would suffer. To avoid this drawback, the ferric chloride may be dissolved in absolute alcohol, an excess of reduced iron (more than enough to reduce the ferric chloride) be added, and the resulting ferrous chloride rapidly added to the boiled oil and lamp-black. Even should the black stain produced by the ink have been entirely removed, the iron absorbed by the paper may still be recognized by tests. —*Deutsch. Ind. Zeit.*

NOTE.—In our opinion, the nigrosin ink, of which we gave a formula on page 27 of our last year's volume, is equally, if not more, indelible on paper than the above ink. Of course, the nigrosin ink is not indelible on linen, because it does not deposit in the fibre, but remains on the surface, and the strong friction to which the linen, etc., is subjected in washing rubs it off. But it cannot be rubbed or washed off paper with any force short of injuring the paper itself.—ED. AM. DRUG.

A NEW POCKET BATTERY.

THE ELECTRO-MEDICAL BATTERY CO., of Kalamazoo, Mich., have lately placed on the market a very efficient battery at a cost of $10, which is worthy of attention. It consists of a neat, polished, wooden box 7x4x2 inches in size, and weighing about 16 ounces, in which is an ingenious form of Trouvé cell, and an arrangement for securing two grades of strength of an induced or Faradic current. The cell is a cylindrical hard-rubber box, one end of which being unscrewed is found to be attached to a rod of zinc, and the inside of the box is lined with carbon with a corrugated surface. To charge the cell it is about half-filled with water and one or two small spoonfuls of bisulphate of mercury are added. The top is then screwed on and the cell placed in position, the pins or trunnions at either end resting in notches in two strips of metal attached to the inside of the box. Rotation of the cell serves to agitate its contents when the current becomes feeble, and with a proper charge, the current will last an hour or more. Ingenious sponge-holders accompany the battery, as well as a rubber-stoppered vial holding enough of the mercurial salt to answer for several charges, and the necessary metallic cords for making connections. The contrivance for changing and interrupting the current is very simple and cannot possibly get out of order. Indeed, the entire apparatus is well-made and durable, and will furnish the means for applying the Faradic current in a compact and serviceable form. We have been very well pleased with a trial of the battery, and have no hesitation in recommending it in place of the bichromate of potash batteries on the ground of greater efficiency and portability, and a smaller cost.

To Stop Hiccough.

A CORRESPONDENT of the *Medical Record* recommends firm compression of the heaving ribs by both hands. In two cases where this was done the hiccough almost instantly ceased.

QUERIES & ANSWERS.

Queries for which answers are desired, must be received by the 5th of the month, and must in every case be accompanied by the name and address of the writer. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for information respecting an unusual or proprietary compound, always accompany the query with all the information you may possess respecting it, and, when it can conveniently be done, send a specimen of the label.

Brandreth's Pills.—DEAR SIR: In your journal for November, p. 350, I notice two formulæ for Brandreth's pills, neither of which is correct. I inclose what I believe to be the true formula, and a most excellent pill it is:

℞ Ext. colocynth..... ℈i.
Aloes socotrinæ..... ʒij.
Gambogiæ..... ʒi.
Saponis castiliensis..... ʒss.
Ol. menthæ pip.....gtt. ij.
" cinnamomi.....gtt. i.
Pulv. acaciæ,
Alcoholis.....āā q. s.
Ut ft. pil. No. lxxx.
S. Dose, 1 to 3, as directed.

I often prescribe two of these pills with one three-grain mass hydrarg. pill at late bed-time, and obtain an admirable effect. Very truly yours,

D. S. CLARK, M.D.

ROCKFORD, ILL.

No. 1,200.—**Oleomargarin** (New Orleans).

We are informed that the "Commercial Manufacturing Company" of New York—the chief producer of this article—consumes about 300,000 pounds or 136 tons *per week*, of beef-fat, in the manufacture of oleomargarin. The total amount of this product exported annually, at present rates, from New York, is estimated (in *Indust. Blätt.*, 20, 213), at eight million pounds.

A portion of the oleomargarin is converted into artificial butter already in New York; another portion goes to Holland, where it is converted by being mixed with milk and other ingredients and subsequent churning, into a mass exactly resembling butter. Great Britain apparently receives the product only in a finished condition, and packed exactly like genuine butter, either under the name *butter-fat, butterine*, or "*bosh*,"—the last-mentioned name is peculiarly elegant and expressive—or as genuine butter itself.

Another compound known as "butterine," and made largely in Chicago, consists of a mixture of butter and lard.

No. 1,201.—**Indelible Ink** (Several Readers).

In addition to the numerous formulæ which we have given in former issues, and which we need not for the present repeat, we will give the following:

Mix 2 parts of sulphuric acid with 14 parts of water and one part of honey, render the liquid blue (so as to be able to see what is written with it) by indigo solution, write upon the paper or linen with goose-quills, and heat the spot, when dry, with a hot flat-iron. The sulphuric acid then carbonizes the honey, and, superficially, also the paper and linen. If delicate fabrics are to be marked, they may first be treated, upon the place to be marked, with a saturated solution of alum and dried. This protects the fibre against the injurious effects of the acid.

For certain purposes, it may be useful to possess a paper which would betray tampering by any chemicals. Such paper can be prepared by coloring with ultramarine and chrome yellow in proper proportions, the resulting color being more or less deep-, or pale-green, according to the quantity of coloring matter used. Upon this paper any ink is indelible, for whether an acid or an alkali be used for attempting to remove it, either one of the component colors would be destroyed, and the tint of the spot be completely changed.

No. 1,202.—**Sinidor** (Ch. W. H.).

This name, which is probably meant to stand for *sine odore* (without odor), and would better be written "sinodor," is an antiseptic substance introduced some years ago. It is prepared by heating neutral acetate of magnesium with calcined magnesia, until the mixture has been converted into a mucilaginous mass. It consists of basic acetate of magnesium, with excess of magnesia, and may be separated from the latter, when diluted, by filtration.

Practically the same compound, though less pure, is obtained by mixing a solution of acetate of magnesium with some caustic alkali.

The compound has been recommended for the removal of bad odors and for preserving organic substances.

No. 1,203. — **Yellow Hydrochloric Acid** (see NEW REM., 1883, p. 361).

A correspondent writes that he has repeatedly traced the yellow color of commercial hydrochloric acid to contamination with organic matter. He does not mean to deny that iron may frequently be the cause of it, but he thinks that this is not always the cause, as seems to be assumed by the writer of the article mentioned. He quotes the instance of bottles of colorless hydrochloric acid which was absolutely free from iron, having become tinted by contact with organic substances, known to be free from iron; at least, no reaction for iron could be obtained in the colored acid.

In the *Chemical News* of Oct. 5th, Leroy W. McCay, of Princeton, referring to the same subject, states that he had examined a lot of such colored acid which was supposed to owe its tint to organic matter. It turned out that it contained a good deal of iron. This result, therefore, coincides with that obtained by the author of the note published in our December number.

It seems to us that probably both of the preceding statements are correct. Probably there is as much chance of an acid being colored by organic matter, as that iron may be the cause.

In a succeeding number of the *Chem. News* (October 19th), there is a further communication by Mr. W. B. Hart, of Manchester, who ascribes the yellow color to the presence of selenium. The source of this, which he actually found present, was no doubt the pyrites used in making sulphuric acid. As selenious acid it was carried into the chambers, and by means of the sulphuric acid into the salt-cake pot, and hence to the condenser along with the hydrochloric acid gas.

The same author points out that a colored hydrochloric acid, which is rendered colorless through the oxidizing action of chlorate of potassium, might erroneously be supposed to be contaminated only with organic matter. The process of oxidation will render the acid colorless even if selenium is present as impurity.

No. 1,204.—**Aniseed Cordial** ("Erie").

(See query 1,192 in last December number of NEW REMEDIES.)

We are informed that the makers of the best aniseed cordial always add a small quantity of fennel, which tempers the taste of the anise and makes it more agreeable. For every pound of aniseed—in case the cordial is made by distillation—about half a pound of fennel is said to be used. If made

from the oils, the oil of sweet fennel alone should be used, and the proportion of oils of anise and fennel—at the above-mentioned ratio of the crude drugs, and taking in consideration the average yield of oil—would be about 4 parts of the former to 3 parts of the latter. It seems to us, however, that a much smaller quantity would suffice, to judge from a rough trial we have made.

No. 1,205.—**Ginger-Beer (English)** ("Subscriber").

We do not know of any formula recognized as that of "English Ginger-Beer," but we select one from our files, which is said to be the recipe of an English manufacturer:

Green Ginger, bruised	24 oz.
Sugar	20 lbs.
Lemon Juice (fresh)	20 oz.
Honey	16 "
Water	18 gals.

Boil the Ginger for half an hour in 3 gallons of water, in a covered vessel. Then add the sugar, and stir until it is dissolved. Remove it from the fire, add the honey, the lemon-juice, and the remainder of the water, cover well and let it cool. When cold, mix it with the white of one egg, beaten up with a little water, add a small quantity of oil of lemon (or orange)—sufficient to suit the taste—and allow it to stand for three days in a moderately cool place. Then put into bottles.

No. 1,206.—**Matta** ("Retail").

This is a name applied some time ago, in Europe, to a mixture, manufactured by certain firms for the purpose of enabling grocers to systematically adulterate spices. It consisted, probably, of ground oil-cake, left after the expression of oil from certain seeds, mixed with the débris of wood, bark, and sand. It was colored in different tints, ready for use to mix with the different ground spices, as pepper, allspice, cinnamon, ginger, etc.

No. 1,207.—**Test of Absolute Alcohol** (G. E. S.).

There is probably no really absolute alcohol obtainable in the market. It can be obtained, entirely free from water, only with great difficulty, and with great loss of time and material. As an alcohol of not less than about 99.5 to 99.7 per cent answers, practically, the same purposes, commercial usage accepts this strength of alcohol as "absolute."

The fact that an alcohol is "absolute" may be ascertained in several ways. Either the alcohol may be agitated with anhydrous sulphate of copper; if of proper strength this salt will remain white; if it contains water, the salt will turn bluish or blue. Or, the alcohol may be mixed with an equal volume of pure benzol; if anhydrous, the mixture will be clear. Finally, it is recommended to drop into the alcohol a piece of anhydrous baryta, which will remain unchanged if water is absent, but otherwise will fall to powder.

No. 1,208.—**Occurrence of Alcohol in Nature** (M. M.).

It is quite true that alcohol occurs in nature. Müntz, who made extensive researches on this subject, found it in spring, river, sea, and rain water; also in snow. At least all these waters contain a substance which is more volatile than water, and when treated with iodine and carbonate of sodium, yields iodoform just like alcohol. Only some very pure spring waters gave negative tests. By comparisons with very high dilutions of alcohol of known strength, it was ascertained that the water of the Seine and rain water contained about 1 gramme of alcohol in one cubic meter (35.3 cubic feet). Snow and cold rain water appeared to contain somewhat more; sea water, however, did not vary much from river water. Since alcohol exists in sea water, we must assume it to be present also as vapor in the air. The extensive occurrence of alcohol in nature is easily explained. The surface of the earth and the sea water contains many organic substances which are constantly undergoing a process of decomposition, of which process alcohol is one of the products. If this is so it must also exist in the soil, and experiment has actually demonstrated this.

No. 1,209.—**To Prevent Show-Windows Sweating in Winter.** (U. Co.)

We have lately read of an apparently ingenious method of accomplishing this. Namely, to put double panes of glass in the window-frame. The outer pane is to be puttied with the greatest care, so as to completely keep out the air. The inner pane may be so adjusted that it can easily be taken out at any time for being cleaned, and replaced without difficulty. This idea is, of course, an old one. It is a common custom in Europe to put an extra set of windows outside the ordinary ones, in winter-time. The temperature in the interval between the windows is generally such that the inner panes are not cold enough to condense the aqueous vapor in the room. Of course it is necessary that the outer windows be perfectly tight.

No. 1,210.—**Assay for Ergot Preparations** ("Mat. Med.").

It is to be regretted that Prof. Dragendorff did not include ergot among the active drugs treated of in his well-known "Chemische Werthbestimmung stark-wirkender Droguen." There is very little, or scarcely any, work recorded on this subject; but we are enabled partly to supply this defect by a communication received from Mr. Byron F. McIntyre (of McIntyre & Embury, 99 North Moore street, New York) who has given this subject close attention.

One of the manufactures of this firm are the well-known *Dialysates of alkaloidal drugs*, which are intended to furnish standardized liquid preparations of the more important drugs, as free from inert substances as possible, and prepared by dialysis. To preserve a uniform standard, these dialysates are assayed. In some cases, this assay is a comparatively simple matter, and the methods are well-known. In other cases, however, notably in that of ergot, new methods had to be devised. The following note, specially referring to the *ergot dialysate*, but, no doubt, also applicable to other liquid preparations of ergot—with necessary modifications—will therefore be a welcome reply to the query.

Alkaloidal Test for Ergot Dialysate.—The potassio-cadmic iodide is an easily decomposed reagent, and not very satisfactory for quick and pronounced results, as the double salt formed is prone to speedy decomposition, so that at the end of one hour, after a full equivalent of test-solution has been added, no further precipitation can be detected. But if tested again after two or three hours, the solution shows again an alkaloidal reaction, showing that the alkaloid has been partly disengaged from the precipitate.

This test-solution, as well as the potassio-mercuric iodide (or Mayer's solution), may be used as confirmatory tests, but are not suitable, apparently, as conclusive reagents. On the other hand, the potassio-bismuthic iodide has proved a very accurate and satisfactory test, giving a dense, insoluble, quickly subsiding precipitate. It is prepared as follows:

Solution No. 1.—A mixture of 80 *cc.* of hydrochloric acid (containing 19.64 gm. of absolute HCl), and 30 *cc.* of distilled water are added to 4.957 gm. of hydrated oxide of bismuth. When dissolved, the liquid is made up to 500 *cc.* with distilled water.

Solution No. 2.—20 gm. of pure iodide of potassium are dissolved in 400 *cc.* of distilled water, and to this are added 100 *cc.* of the volumetric solution of soda, U. S. P., 1880, making half a liter.

Solution No. 3.—Distilled water, containing 5 per cent of pure iodide of potassium.

When applying the test, the dialysate must always be of the same degree of acidity, and diluted with the specified volume (see below) of Solution No. 3. To a definite volume of Solution No. 2, a like volume of Solution No. 1 must be added, with vigorous shaking. This test-solution must be mixed in perfectly clean beakers, and must be used within ten minutes after being prepared.

A second portion of the test-solution cannot be prepared in the same beaker, until it has been carefully cleaned with distilled water.

After adding the test-solution to the dialysate, the mixture is gently agitated, and put aside for four hours before making a test to determine whether all of the alkaloid has been precipitated.

The standard test itself is thus performed: 10 cubic centimeters of the dialysate are diluted with 80 *cc.* of solution No. 3 (containing 5 per cent of iodide of potassium). To this mixture add 33 *cc.* of test-solution of potassio-bismuthic iodide (prepared by mixing equal volumes of Solutions No. 1 and 2), and shake gently. Then set aside for four hours, remove a little of the clear liquid over the precipitate with a pipette, and add a little of the test-solution. This should not produce any further precipitate.

At the end of another four hours, however, when tested again with 30 *cc.* of the solution, the supernatant liquid will show a further precipitation.

To summarize—10 volumes of the dialysate of ergot should require not less than 30, nor more than 33 volumes of the solution of potassio-bismuthic iodide to precipitate all the alkaloidal substances in form of a heavy brick-red precipitate.

It should be added that, so far as now known, all active constituents of ergot, including sclerotic acid, are precipitated by the above reagent.

This process, therefore, appears to be of value in testing the alkaloidal strength of any liquid preparation of ergot, known to be free from any other substance (not belonging to ergot) that will produce similar precipitates.

The dialysate of ergot represents 1 part of the drug in 2 parts of liquid. The test will have to be re-adjusted when applied to other preparations.

No. 1,211.—**Prescription Difficulty** ("Precipitate").

This correspondent writes: I have been unable to obtain a clear solution in compounding the inclosed prescription, which is similar to the one printed in the November number of NEW REMEDIES (p. 351):

℞ Ammonii Bromidi	ʒ iv.
Quininæ (alkal.)	ʒ i.
Ferri Pyrophosphatis	ʒ iv.
Acidi Phosphorici dil.,	
Syrupi Aurantii,	
Aquæ	āā f. ʒ ij.

My acid answers the U. S. tests, and I have used citrate of ammonium, manipulating as suggested by Mr. Baker; but so far have failed to prevent a precipitate or dissolve it after it is formed."

When we printed the note referred to by our correspondent, we intended to accompany the same by a note of our own, showing that the difficulty was of a different nature. By an oversight this was omitted, and we are glad of having an early opportunity to put this matter right.

Orthophosphoric (or the officinal phosphoric acid) is known to be free

from metaphosphoric or pyrophosphoric acid, when it remains clear on being mixed with tincture of iron. Therefore when tincture of iron is to be used in a mixture containing phosphoric acid, only the officinal, orthophosphoric acid should be used. In the case of a solution of pyrophosphate of iron (rendered soluble by the citrate of an alkali), however, the case is just the reverse. If orthophosphoric acid be added to this solution, a gelatinous precipitate is produced which it requires a considerable excess of the acid to dissolve. At the same time, this solution is accompanied by a total loss of every trace of the characteristic green tint of the solution; in fact, the solution is colorless. But, if metaphosphoric acid, or a solution of glacial phosphoric acid be added to a solution of the pyrophosphate, no precipitate is produced, and the addition even of an excess of the acid does not change the color. This shows that the metaphosphoric acid exerts but little, if any, influence upon the constitution of the pyrophosphate.

Hence, when pyrophosphate of iron occurs in a mixture to which phosphoric acid is to be added, an aqueous solution of the glacial acid must be used. It is true, the glacial acid, as it usually occurs in the market, is not pure, containing from 10 to 30 per cent of phosphate of sodium, which is added to permit its being cast in form of sticks. Nevertheless, the presence of this impurity is only harmful to this extent that it diminishes the percentage of free acid present. The former U. S. Pharmacopœia directed diluted phosphoric acid to be made either from phosphorus itself, or from glacial phosphoric acid (1 troy ounce to make 12½ fluid ounces), which was to be converted into orthophosphoric acid by being heated with nitric acid. Of course, when we speak above of an aqueous solution of glacial phosphoric acid, we mean that the glacial acid should be at once dissolved in water, *without* being first treated with nitric acid, which would destroy the metaphosphoric acid. If any one cannot readily obtain the commercial glacial acid, or would prefer to have metaphosphoric acid free from foreign impurities, this may be made by burning small pieces of phosphorus over a plate in a confined space of air. The white, snow-like phosphorus pentoxide thus formed, when allowed gradually to absorb water from the air, or when dissolved in cold water so as not to raise the temperature much, furnishes a solution of metaphosphoric acid. But if the solution is heated, or if the acid be in solution for a long time, the metaphosphoric is converted into the orthophosphoric acid.

The bromide of ammonium in the above mixture does not appear to introduce a special difficulty, though it is quite likely that hydrobromate of quinine and phosphate of sodium are formed during the solution, and the hydrobromate of quinine is dissolved by the phosphoric acid. With the sample of glacial acid in our possession, it required a little over 2 fl. oz. of a solution containing 1 ℥ in 12 fl. oz. to render the above mixture clear.

The pyrophosphate of iron should be dissolved in 2 fl. oz. of boiling water, and the solution cooled. The quinine should be dissolved in a mortar, in 2 fl. oz. of the solution of glacial phosphoric acid, then the bromide of ammonium added, and the solution of the pyrophosphate, and finally, if required, a little more glacial acid, to render the mixture clear.

No. 1,212.—**Best Form of Administering Codeine** (J. O. W.).

Since Merck of Darmstadt has found that phosphoric acid forms a very soluble and stable salt with codeine, there can be no doubt that the phosphate is the most eligible salt to use. It crystallizes in small four-sided columns, is white, has a bitterish taste, and is soluble in four parts of water. It is very suitable for hypodermic injections. Codeine acts like morphine, only in a less energetic manner, and does not stupefy so much.

No. 1,213.—**Parchment-Paper** (F.).

To make good parchment paper, it is, above all, necessary to select good, unsized paper, free from foreign filling, made of pure vegetable pulp, and so dense that no pin-holes can be observed in it when it is held up to the light. It should be made of long-fibered material, if possible. Though we have never tried Japanese paper, we should imagine that this would yield the toughest and strongest parchment paper, even though the very finest and lightest qualities (free from pin-holes) of Japanese paper were selected.

It is true, there is at present no depot of Japanese paper in this country, so far as we know. Small lots are occasionally imported to order. If any is needed, there is no difficulty in obtaining it through one of the Japanese importing firms established in New York, Boston, and other large cities.

If parchment paper can be made from an endless roll, the resulting product will be much nicer, because it is kept on a gentle stretch the whole time that it passes the different parts of the machine, and is finally ironed and calendered. If the sheets are dipped singly, some contrivance must be adopted to keep the paper on a stretch while drying, as it will otherwise curl and twist, and will become very brittle, particularly at the ridges of the curls.

When made on the large scale, paper wound on a roll is drawn first through sulphuric acid, prepared by mixing 2 volumes of concentrated sulphuric acid with 1 volume of water, and allowing to cool (according to others, the proportions are 1,000 parts of sulphuric acid to 125 [or more] parts of water)—where it remains from 5 to 30 seconds, according to the thickness. It is then immediately drawn through water, next through dilute ammonia, then again through plenty of water, and finally passed between heated rollers, where it is dried.

In place of sulphuric acid, phosphoric acid has been employed with success; also a syrupy solution of chloride of zinc, free from excess of acid and heated to between 50° and 100° C.

It has been recommended to saturate the paper with alum before drawing it through the sulphuric acid. This has been found to render it less liable to be made rotten by the acid. The latter acts more on the surface and the paper loses neither its flexibility nor its transparency.

During the treatment with acid, the surface of the paper is converted into a sticky form of dextrin. It is, therefore, easy to prepare thick pasteboards by piling a number of layers on top of each other.

Artificial parchment or parchment paper has also been called *papyrin* and *membranoid*.

No. 1,214.—**Eau de Javelle, etc.** (M. E.)

The term *Eau de Javelle* is, properly speaking, applied only to a solution of chlorinated potassa (the potash salt corresponding to chloride of lime). In this country, however, it is very generally taken as a synonym for Solution of Chlorinated Soda or *Labarraque's Solution*.

Eau de Javelle is named after the place where it was first prepared, namely, the Mill of Javelle (moulin de Javelle), between Paris and St. Cloud. Sometimes it is spelled Eau de Javel, and it has been supposed to be named after the inventor.

Labarraque was a pharmacist of Paris, who brought the solution named after him into vogue during the cholera of 1832.

There are some other bleaching solutions, likewise going under special names, viz.

Wilson's Bleaching Liquid; this is a solution of chlorinated alumina.

Ramsay's or Grouvelle's Bleaching Liquid; a solution of chlorinated magnesia.

Both of the above are prepared from chlorinated lime by treating it with sulphate of aluminium or sulphate of magnesium, respectively.

In certain cases, particularly in bleaching delicate fabrics like silk, the last-named bleaching liquid is greatly preferable, as it is devoid of the caustic alkaline effect, so common with the potash or soda compound.

Varrentrapp's Bleaching Liquid, is chlorinated zinc also prepared from chlorinated lime and sulphate of zinc.

No. 1,215.—**Birch Beer** (Ohio).

The birch tree contains a colorless acid and sweet sap which may be obtained by boring holes about one or two inches deep into the trunk during spring, and putting tubes into the holes, with cups at the end. It is said that 50 white birch-trees, of about 18 inches diameter, yield in four days about 350 pounds of sap. This sap contains, according to Boussingault (Rur. Econ. p. 65), sugar, extractive matter, acetate (?) of calcium, aluminium (?), and potassium. The same authority says that the presence of acetate aluminium may appear extraordinary for the reason that alumina has not yet been found among the constituents of the ash of the tree.

A very excellent sparkling beer or wine can be made from this sap by adding to it from 8 to 10 per cent of its weight of sugar and 0.2 to 0.3 per cent of tartaric acid. According to another authority, the best product is made by adding to 100 pounds of the sap about 6 oz. of tartaric acid and 8 to 10 (or if a stronger product is wanted, 16 to 24) pounds of sugar and 3 oz. of a strong almond milk. The mixture is fermented in the us ual manner, put in bottles with a little more sugar, and securely sealed.

This beverage is much used in the North-Russian provinces Courland and Livonia, where large birch-forests exist.

No. 1,216.—**Elder Berries.**—In what locality of the United States or Canada is elder (*Sambucus canadensis*) found in sufficient quantity to make the collection of elder-berries profitable? An answer to this query will be of interest to several of our correspondents.

Acid to Write on Glass.
Bleaching Ivory and Bone.

THESE queries, numbered repectively 1,168 and 1,176 in our number for October of last year, have brought a communication from B. Newham & Co., of Castle Hill, Sheffield, England, in which it is suggested that the querists probably had in mind two of their preparations, viz.: "Vitrographine," and "Ivory Bleach." The former can be used for ornamenting, matting, frosting, roughing, writing, or drawing upon glass, and cannot be washed off or removed by any process at present known. Its applicability to many uses is very great, and for druggists, especially, it will serve for labelling acid-bottles, marking the tare on bottles and jars, graduating measures and bottles, etc. It costs 6*d.* per ounce, or 6*s.* per pound.

The "Ivory Bleach" whitens animal and most, if not all, vegetable tissues without injury to the fabric, and is especially useful for bones, bristles, feathers, hair, ivory, leather, silk, sponge, whalebone, etc. Articles once

bleached retain their whiteness, and the whole substance is bleached, as well as the surface. The price is 6*s.* 6*d.* per gallon, in 12 gallons carboys, or 10*s.* per gallon in smaller quantities.

Answers in Exchanges.

SCIENTIFIC AMERICAN.

Nickel Plating, if well done on solid metal, ought not to rust. If on cast iron which is porous, the nickel will be also porous, if not thickly plated. You may oil the articles with linseed-oil and heat to a little above the temperature of boiling water. Then polish with whiting, chalk, or electro-silicon. The oil fills the pores and prevents future rust.

A Very Black and Indelible Drawing Ink may be made by dissolving shellac in a hot-water solution of borax, and rubbing up in this solution a fine quality of India ink; this may be made by rubbing down a genuine India ink with good black ink until it flows easily from the pen.

For Repairing Mirrors accidentally scratched, clean the bare portion of the glass by rubbing it gently with fine cotton, taking care to remove any trace of dust and grease. If this cleaning be not done very carefully, defects will appear around the place repaired. With the point of your knife, cut upon the back of another looking-glass around a portion of the silvering of the required form, but a little larger. Upon it place a small drop of mercury; a drop the size of a pin's head will be sufficient for a surface equal to the size of the nail. The mercury spreads immediately, penetrates the amalgam to where it was cut off with the knife, and the required piece may now be lifted and removed to the place to be repaired. This is the most difficult part of the operation. Then press lightly the renewed portion with cotton, and the glass presents the same appearance as when new.

BIBLIOGRAPHY.

CHEMISTRY: INORGANIC AND ORGANIC, WITH EXPERIMENTS. By CHARLES LONDON BLOXAM, Professor of Chemistry in King's College, etc. From the fifth and revised English edition. Pp. 700, 8vo. With 292 illustrations. Philadelphia: Henry C. Lea's Son & Co., 1883; cloth $3.75, leather $4.75.

BLOXAM'S hand-book is so well and favorably known that it does not require a formal introduction. Our task of reviewing is made comparatively easy by the fact that we have used the work ourselves very frequently for reference, or as the basis for explaining chemical facts to others, and so far as the scope of the work extends, it has always served our purpose well.

One of the particular merits of Bloxam's work is the minuteness and fulness with which the more important elementary substances and their compounds are treated. The enumeration of dry facts is judiciously relieved at every step by the introduction of interesting experiments, or the explanation of the practical use of the substance in question. In fact, the application of chemistry to the useful arts forms a prominent feature of the work. In the section of organic chemistry, the author wisely restricted himself to the introduction of the main groups under which organic substances of practical usefulness can be divided.

We might express the wish that the peculiar feature of the English edition of using English weights and measures and Fahrenheit degrees of temperature exclusively might have been altered in the American edition so as to give the metric terms and centigrade scale at least in brackets. And we recommend that this be done at a future edition.

The publishers have done full justice to the work, which we are sure will continue to have a large circulation.

THE MEDICAL STUDENT'S MANUAL OF CHEMISTRY. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Toxicology in the University of of Buffalo, and in the University of Vermont, etc. 8vo. New York: William Wood & Co., 1883.

As we might have reasonably expected, from our examination of previous works of the same author, the subject of the present volume has been handled with circumspection and care. The first or introductory part contains explanations of general laws, nomenclature, etc. The second part contains the chemistry of the elements. In treating this subject, the author departs from the usually adopted division into metals and metalloids, in consideration of the fact that, in certain cases, it is now difficult to decide whether an element should be classed with the one or the other. He substitutes a method of division of his own, which is based upon the chemical properties of the oxides of the elements, and upon their valence. We acknowledge the author's right, as a teacher, to classify his subject in any matter comformable to his method of thinking and appearing to him the best under which to group facts. Yet we do not think that this particular system of division will fully escape the fault for which the former was discarded. And for that matter, we yet cannot conceive any system which would fit the facts—so far as they are known—completely.

The author's division is as follows:

I. "Typical" Elements: *H* and *O*.

II. Elements whose oxides unite with water to form acids, never to form bases. Which do not form oxysalts.

This class contains seven groups (including the Carbon Group).

III. Elements whose oxides unite with water, some to form bases, others to form acids. Which form oxysalts. (Nine groups.)

IV. Elements whose oxides unite with water to form bases, never to form acids. Which form oxysalts.

As in a former work of the author, so in the present one, the organic substances are all treated of under Carbon, without interrupting the classification above given, which appears to us not as convenient as the usual method of treating them separately, though it may be logically correct.

Having thus briefly stated some of the points in which we do not quite agree with the author, we now turn to to the text itself, and, having read over those portions which interest us specially, we are fully satisfied that the work will be, in the hands of the student, a useful and safe guide for study and work. The portion allotted to inorganic and organic chemistry proper is almost too full for a student's manual; but this is a feature more readily corrected than barrenness; and while one mind would decide a certain chapter superfluous, another would miss its absence.

A very useful part of the work is the last, containing a chapter on Chemical Technics, including reagents, the preparation of apparatus, and instructions in chemical manipulation. This is followed by several schemes of systematic analysis.

THE PHYSIOLOGICAL FACTOR IN DIAGNOSIS: A Work for Young Practitioners. By J. MILNE FOTHERGILL, M.D. New York: William Wood & Co., 1883. Pp. 256. 8vo.

IT is hardly to be supposed that the "young practitioners" will be the only ones who will read this book. To many older ones who, weary of dry clinical details written by men whose claim to authority gains nothing from their style of composition, anything by Dr. Fothergill serves as a feast, and this latest work will prove no exception. Its chapters relate to the history of the family and individual; external appearance; the tongue; respiration; pulse; alimentary canal; urine; reproductive organs; temperature; motor and sensory disorders; patient's sensations; the patient in his bed-room, and end with a concluding chapter. It abounds withgood sense from first to last.

ANATOMY, DESCRIPTIVE AND SURGICAL By HENRY GRAY, F.R.S., etc., with an Introduction on General Anatomy and Development by T. HOLMES, M.A. Cantab., etc. New American, from the Tenth English Edition, to which is Added Landmarks, Medical and Surgical, by Luther Holden, F.R.C.S., with additions by William Keen, M.D. Philadelphia: Henry C. Lea's Son & Co., 1883.

"GRAY'S ANATOMY" needs no longer to be recommended to American students; for every first year's student buys it as a matter of course, and finds in it all that he can wish for as an anatomical guide in the class-room, dissecting-room, or hospital.

Bound in half-Russia, it is a desirable and handsome volume for the shelf or table.

THE ROLLER BANDAGE. By WILLIAM BARTON HOPKINS, M.D., Surgeon to the Out-Department of Pennsylvania, Episcopal, and University Hospitals, etc. Seventy-three Illustrations. Philadelphia: J. B. Lippincott & Co., 1883. Pp. 95. Sm. 8vo. $1.25.

THE essential feature of this book is its illustrations. Instead of making use of the antique pictures that have so long done service in hand-books upon this subject, and which are quite as often faulty as correct, the artist has made use of photographs from actual practice as a basis for drawings which are reproduced by a photo-relief process, and are, as a rule, remarkably life-like. The variety of illustration renders extended descriptions less necessary. The text, however, is sufficiently detailed, and the book, as a whole, is far superior to anything of its kind that we have yet seen.

CHEMISTRY, GENERAL, MEDICAL, AND PHARMACEUTICAL; Including the Chemistry of the U. S. Pharmacopœia. A Manual on the General Principles of the Science, and their Applications in Medicine and Pharmacy. By JOHN ATTFIELD, F.R.S., etc. Tenth Edition, Specially Revised by the Author for America. 8vo. Philadelphia: Henry C. Lea's Son & Co., 1883.

IT will scarcely be necessary, with reference to Prof. Attfield's well-known work, to say more than that this new edition has been specially written with a view to embrace the chemistry of the new U. S. Pharmacopœia, which will be of special value to the students in our pharmaceutical Colleges. It contains also nearly everything relating to the chemistry of the British and Indian Pharmacopœias. The new edition has been printed with beautiful, clear type, on excellent paper, and may serve as a specimen of what American publishers can produce.

WORK-SHOP RECEIPTS (Second Series). By ROBERT HALDANE. London and New York: E. & F. N. Spon, pp. 485, 8vo. $2.00.

THIS is a very complete handy book of information which is likely to be of service to apothecaries as well as to other artisans. For example, it has articles upon Acidimetry, Alkalimetry, Alcohol, Alkaloids, Bitters, Cements, Cleansing, Confectionery, Essences, Extracts, Glycerin, Ink, Iodine, Iodoform, Magnesia, Pigments, Paint, Preserving, and many other topics, some covering many pages and including formulas and processes. Illustrations

are used when needed to make the text clearly understood. The book will not only supply knowledge that may often be essential, but will also prove interesting reading in leisure hours, for those who have any taste for such literature.

THE PHYSICIAN'S VISITING LIST for 1884. (Thirty third year.) Philadelphia: P. Blakiston, Son & Co.

THIS is one book which it is safe to say every physician must have if he has any regard for accurate business records, and which pharmacists may well keep in stock. It is published in various styles and sizes, varying in price from $1.00 to $3.00, and is arranged to meet the wants of a majority of practitioners.

THE DRUGGISTS' POCKET PRICE-BOOK; for Retailers, Jobbers, Manufacturers, and Travelling Salesmen. Showing the Exact Location of Every Article in the Store, Cost and Selling Price, Quotations, Discounts, etc. Third Edition. Entirely Rewritten, Rearranged, and Improved. By BENJ. LILLARD. New York: J. H. Vail & Co., 1883. Pp. 627; $3.00.

THIS is a very great improvement upon the original work by Nelson, and leaves very little to be desired. It includes titles of pretty much everything that is likely to be handled in the drug trade, and has blank spaces for articles which may eventually be added. The method for indicating the location, in the store, of the articles enumerated is simple, and cannot fail to be of great service. Without some such aid to the memory, the retail dealer is apt to lose sight of stock already at hand, and purchase new supplies far in excess of his needs. By using a book of this kind, there will be no necessity for marking cost or retail price on the articles themselves. And the facility with which an inventory can be made and kept by its use renders it almost indispensable in every store, no matter how small its stock may be.

The compilation has been done with apparent care, and we fail to note errors or omissions of importance. We are sure that no one connected with the drug trade who has occasion to refer to names or prices can afford to be without this pocket-book.

AUS DER GESCHICHTE DER GIFTE. Vortrag, gehalten im Rathhaussale zu Zürich, den 18. Januar 1883, von PROF. EDUARD SCHÆR. 8vo. Basel, 1883.

(No. 7 of volume vii. of: Oeffentliche Vorträge, gehalten in der Schweiz.)

AN interesting review of the history of poisonous substances used in ancient and mediæval times for criminal, judicial, superstitious, and other purposes.

WHOLESALE PRICE-LIST OF DRUGS, Chemicals, Pharmaceutical Preparations, Essential Oils, Druggists' Articles, etc., etc. LEHN & FINK, Importers, Exporters, etc., 128 William street, New York.

THIS new price-list of Messrs. Lehn & Fink will be found to contain a very complete and well-arranged list of the drugs and preparations in use in this country. The new drugs lately introduced, and also the rarer active principles, usually imported only on special demand, will be found quoted.

UNITED STATES SALARY LIST AND THE CIVIL SERVICE LAW: Rules and Regulations, with Specimen-Examination Questions in the Custom House, Post Office, and Classified Departmental Service. Prepared under the Direction of Henry N. Copp, Attorney and Counselor at Law. Washington, D. C., 1883; pp. 143, 8vo.

THE information contained in this pamphlet has not heretofore been available for most people, and its publication in this form deserves to receive very general encouragement.

ASSOCIATION AND COLLEGE NOTES.

College of Pharmacy of the City of New York.—The present session of this College is the most prosperous since its existence. Although the requirements for graduation have been gradually raised from year to year, the attendance on the course is in excess of any preceding it. The Junior class numbers 186, and the Senior 128 members. Voluntary laboratory students number about 70; this is, of course, exclusive of the regular obligatory instruction which every student must receive during at least thirteen days of the session.

The organization of the obligatory chemical and pharmaceutical laboratory, with the beginning of this session, has taught the Board of Trustees, as well as the Professor, many valuable lessons, which will be utilized in improving the course at every step.

Steps have already been taken to combine with the current lecture course in analysis a practical course in pharmaceutical manipulations—which had, at first, been intended to be postponed until next session.

It is in contemplation to inaugurate a system of preliminary examinations for the ensuing year. This has been long proposed, but, for various reasons, it has been found impossible, up to the present time, to introduce it. In this matter, much depends upon the proprietors of pharmacies. When selecting apprentices, or accepting the services of beginners, they should, *whenever possible*, be more discriminating, regarding the qualifications of applicants. Though each one is a law unto himself, and no State law can here enforce a standard of qualifications for entering this profession, the advantage of attracting a well-educated class of young men is self-evident. We are quite aware of the difficulties in the way, and the comparatively distant prospects of material benefit for the young aspirants. Nevertheless, an improvement is necessary, and a discrimination in the admission of applicants to the College of Pharmacy, depending upon their previous education, is imperatively demanded. It cannot fail to benefit both the reputation of the College and the members of the profession.

Pennsylvania.—A meeting of Philadelphia druggists was held on the 30th of October, at which the following resolutions were adopted, and an effort is being made to enlist the co-operation of all retail dealers in that city in support:

Resolved 1. That we, the retail druggists of Philadelphia, hereby agree that unless the manufacturers, jobbers, or wholesale dealers in Proprietary or Patent Medicines, discontinue the sale of said articles to any one known to retail such, or other articles, at less than regular retail prices, we will not buy any goods whatsoever from such manufacturers, jobbers, or wholesale dealers.

Resolved 2. That we pledge ourselves to notify the Trade Association of Philadelphia Druggists of any authentic case that may come to our notice of such cutting of prices, and that we hereby request that Association to appoint a committee to investigate such charges, and if proven, to notify the wholesale trade of such parties so offending, and call their attention to the first resolution.

Resolved 3. That this action will take effect on and after January 1st, 1884.

Colorado.—The Denver Board of Aldermen have levied a uniform license upon all who retail malt or spirituous liquors. A committee of that body found from 50 to 75 drug stores in the city selling whiskey and doing almost nothing to support the local government. They thereupon recommended a license be exacted, and it was done. The apothecaries presented a petition, numerously signed, asking that the ordinance be amended so as to apply to those only who sell the vile nostrum "as a beverage." Considering the right of people to petition, the City Council took into consideration how easy it is to obtain names for any purpose so that the signers are not called upon to put their hands in their pockets, it being easier to put one's name to a petition than to discuss the merits of the business with the solicitor, and rendered the following opinion: "If whiskey selling is profitable, then pay the license. If it is not, then let it alone. A profession that can put a penny's worth of potassium in a phial, fill it with rain water, and sell it for fifty or seventy-five cents, can well afford to help support the government."—*Weekly Drug News.*

Missouri.—The State Pharaceutical Association held its fifth annual meeting in the Board of Public School Directors' room, Polytechnic Building, St. Louis, Mo., commencing Tuesday, October 23d, and lasting till the Thursday following.

After President M. W. Alexander had delivered an address and a new constitution had been adopted, officers for the ensuing term were elected, as follows:

President, O. A. Wall, St. Louis; *Vice-Presidents*, I., H. C. Churchill, Windsor; II., J. W. Llewellyn, Mexico; III., J. A. Gallagher, Kansas City; *Permanent Secretary*, G. H. Chas. Klie, St. Louis; *Local Secretary*, C. M. Kelly, Brownsville; *Treasurer*, Prof. J. M. Good, Brownsville.

A motion was adopted, that in future the newly-elected officers are not to be installed until immediately previous to adjournment of the meeting at which they have been elected. The name "executive committee" wherever it occurs in the constitution, was changed to "council." The following gentlemen were elected members of the council: F. W. Sennewald, St. Louis; D. T. Wooldridge, Boonville; M. W. Alexander, St. Louis; George Ude, St. Louis; and Dr. A. R. Edmunds, Miami.

Committee on Trade Interests, J. T. Plunkett, Brunswick; A. W. Sinclair, St. Louis; and H. C. Arnold, Kansas City.

Committee on Papers and Queries, Prof. Oscar Oldberg, St. Louis; W. T. Ford, Kansas City; and Dr. H. E. Ahlbrandt, St. Louis.

Committee on Legislation, M. W. Alexander, St. Louis; D. T. Wooldridge, Boonville; and H. M. Petit, Carrolton.

Prof. J. M. Good read a paper on "Articles Dismissed from the Pharmacopœia."

Prof. O. A. Wall read two papers. One, "A few Words on Spurious Star Anise;" the other, "A few Words on Spurious Male Fern."

Prof. C. O. Curtman's paper treated of the "Artificial Production of Cold and Ice."

Prof. Oscar Oldberg read a paper on "The Importance of the Vegetable Materia Medica."

This was followed by the reading of a paper on "Syrup of Orange Peel," from Mr. F. W. Sennewald, and one on "Kairin," by G. H. Chas. Klie.

The Association gained nearly one hundred new members, mostly from St. Louis, at this meeting. After installation of new officers, the Association adjourned, to meet at Brownsville on the second Tuesday in June, 3 P.M., 1884.

Illinois.—The State Pharmaceutical Association, at its meeting in Springfield, on the 9th and 10th of October, elected the following officers and committees:

President, H. Le Caron, Braidwood; *Vice-Presidents*, H. W. C. Martin, Chicago; R. N. Dodds, Springfield; F. A. Stevens, Newton; *Secretary*, T. H. Patterson, Chicago; *Treasurer*, M. Williams, Taylorville; *Executive Committee*, W. P. Boyd, Arcola; A. A. Brown, Sterling; H. H. Green, Bloomington. For *State Board of Pharmacy*, A. W. H. Reen, Peoria; H. Schroeder, Quincy; A. G. Vogeler, Chicago.

The following committees were appointed: *Pharmacy and Queries:* A. G. Vogeler, Chicago; H. Smith, Decatur; C. S. Hollberg, Chicago. *Legislation:* G. P. Engelhard, Chicago; C. W. Day, Allendale; H. Schroeder, Quincy. *Trade Interests:* W. W. Marmon, Bloomington; J. D. Backard, Lexington; C. McDaniel, Saybrook. *Drug Adulterations:* F. C. Bourscheidt, Peoria; C. H. Grube, Robinson; E. J. Blair, Springfield. *Necrology:* R. H. Cowdry. Chicago; J. C. Bodenschatz, Lemont; W. W. Pond, Ipava. *Progress of Pharmacy:* A. E. Ebert, Chicago. *Membership:* T. H. Patterson, Chicago. *Delegates to Amer. Pharm., and Nat. Retail Drug Associations:* A. E. Ebert, Chicago; H. Biroth, Chicago; W. P. Boyd, Arcola; A. P. Cunningham, Champaign; J. J. Schubert, Kankakee.

The next meeting will be held at Bloomington, on the 30th of September, 1884, Mr. J. E. Espey acting as Local Secretary. The Association has 742 members, and its income, last year, was $781.

New Hampshire.—The Board of Pharmacy, which met at Concord, Oct. 9th, consists of Messrs. C. A. Tufts, Dover; E. H. Currier, Manchester; Dr. C. T. Hildreth, Suncook; and G. F. Underhill.

Four out of six candidates examined were registered, and two persons were registered under the five-years clause of the Pharmacy act.

The tenth annual meeting of the State Pharmaceutical Association was also held on the 9th of November and elected the following officers and committees: *President*, Frank H. Chaplin, Franklin Falls; *Vice-Presidents*, Jas. O. Burbank, Manchester; Stephen F. Sanderson, Rochester; *Secretary*, George F. Underhill, Concord; *Treasurer*, Henry B. Foster, Concord; *Auditor*, A. Perley Fitch, Concord; *Reporter on Progress of Pharmacy*, Parker I. Noyes, Lancaster; *Executive Committee*, Robert C. Dickey, Hillsboro; George L. Brown, Concord; George F. Underhill, Concord; *Delegates to A. P. A.*, Chas. A. Tufts, Dover; Elias S. Russell, Nashua; Lewis K. Mead, Manchester; James O. Burbank, Manchester; Frank A. Chaplin, Franklin Falls. *Alternates*, Chas. T. Newman, Manchester; George F. Underhill, Concord; Frank A. James, Manchester; Chas. A. Merrill, Exeter; Edward A. Brockway, Franklin. *To Maine P. A.*, F. L. Banfield, Wolfborough; Frank J. Philbrick, Portsmouth. *To Mass. P. A.*, George Moore, Great Falls; Stephen F. Sanderson, Rochester. *To Vt. P., A.*, L. B. Downing, Hanover; H. P. Kendrick, Lebanon. *To R. I. Ph. Assoc.*, Edward A. Brockway, Franklin; Chas. H. Martin, Concord.

The next meeting will be held at Lancaster.

Delaware.—The State Pharmacy law contains the following clause:

§ 7. Every dispenser of drugs shall keep a record of all sales of strychnine, arsenic, opium, or its preparations, unless prescribed by a physician, and the said record shall be open to inspection by proper legal authority. Provided that nothing in this act shall prohibit the sale of commercial drugs in general stores, and this section shall not be deemed to require the keeping of a record, in such stores, of sales of the preparations of opium.

The editor of the *Weekly Drug News* points out the fact that this places restrictions upon the only class of dealers who are most likely to protect the public from improper use of poisons, and gives free license to grocers and general store-keepers.

Since all drugs are, strictly speaking, commercial, we see no reason why the general store-keeper may not escape all trouble by avoiding any representation that he is a pharmacist.

Wisconsin Druggists' Union.—The following has been circulated throughout the State by a committee of the Wisconsin Pharmaceutical Association, for signatures, and is said to have met with much favor in Madison, Janesville, Fond du Lac, and other cities:

We, the undersigned———druggists, hereby form ourselves into the "Druggists' Union," the object being to regulate the sale of patent and proprietary medicines at retail. And we hereby pledge ourselves to adhere to the resolutions adopted by this meeting, a copy of which will be furnished to each member.

It is further agreed that, in case any member violates the adopted scale of prices, either directly or indirectly, such person or firm shall, upon conviction, forfeit the sum of $25, to be paid to the Druggists' Union.

Said forfeit shall be paid only by order of a committee, to be composed of three druggists, one of whom shall be chosen by the informant, one by the accused, and the other by the two already chosen, and when so paid, to be divided equally among the other druggists signing this agreement. This agreement to take effect on its signing by all the druggists and patent-medicine dealers.

We hereby agree to sell all patent or proprietary medicines and articles at the prices established by the manufacturers, as per retail list of Van Schaack, Stevenson & Co.

It is further agreed that any unstable and old stock preparations may be sold by the owner, with a view to close them out, for such prices as they may see fit.

And it is further agreed that, if at any time any of the parties signing the above articles are dissatisfied, they may withdraw, upon serving thirty days' notice, in writing, upon the Secretary of the Local Union.

California.—The annual meeting of the Alumni Association of the Cal. Coll. of Pharm. was held at the College Hall, Thursday evening, Nov. 8th.

In the absence of the President and Vice-President, the meeting was called to order by F. Lengfeld, senior member of the Executive Committee.

The reports of the various officers and committees were read and accepted, officers for the next year were elected, and subjects concerning the welfare of the College were discussed.

Among other subjects, that of the separation of the College from the Cal. Pharm. Soc., and joining it to the University of California, on the same basis as the Medical and Dental Departments, received the approval of most of the member spresent, as did also that of raising the percentage necessary for graduating to the old standard of 66⅔ per cent, instead of 60 per cent to which it was lowered by the trustees last year. After discussing other, unimportant business, the meeting adjourned.

The officers for the ensuing year are: *President*, D. M. Gove; *Vice-President*, S. L. Leszynsky; *Secretary*, D. M. Fletcher; *Treasurer*, Chas. M. Troppman; *Executive Committee*, to serve one year, F. Lengfeld and J. H. Barbat; to serve two years, W. B. Beckett and A. L. Scholl.

D. M. FLETCHER, *Sec.*

Michigan.—In compliance with a call signed by upwards of 300 pharmacists, a meeting was held at Lansing, on the 14th and 15th of November, with an attendance of 78 persons. The organization of a State Pharmaceutical Association was accomplished and the following-named persons elected to office: *President*, Frank Wells, Lansing; *Vice-Presidents*, Isaac Watts, Grand Rapids; James Dodd, Buchanan; W. B. Wilson, Muskegon; *Permanent Secretary*, Jacob Jerson, Muskegon; *Assistant Secretary*, A. W. Allen, Detroit; *Treasurer*, William Dupont, Detroit.

The pharmacists of Detroit held a meeting, on the 18th of October, and organized an Association, electing A. B. Stevens, *President;* A. W. Allen, *Vice-President;* and F. Inglis, *Secretary* and *Treasurer*.

The St. Louis, Mo., Drug Clerks are about to organize an Association.

Minnesota Pharmacists held a meeting at St. Paul, on the 9th of October, to take steps for organizing a State Association.

National Retail Drug Association.—Mr. E. A. Sayre, of Brooklyn, the Chairman of the Executive Committee, reports that, up to the 15th of November, the membership of this Association had increased to about 500.

New York.—At the meeting of the Kings County Society, held on the 12th of November, the attendance was unusually small, and much of the time was occupied in discussing the prospects and purposes of the N. R. D. A. and "trade interests." Solutions for show-bottles was the chief topic of interest besides.

NEW PATENTS.

[*Complete specifications and illustrations may be obtained of any one or more of the following patents by sending the number, title, name of patentee, with twenty-five cents for each copy, to the Commissioner of Patents, at Washington, D. C., together with the name and address of the person requesting the same.*]

287,429. *Manufacture of Medicated Food.*—Charles Isidore Flasschoen, Paris, France. A mixture for union with bread, consisting of salts of iron, manganese, and phosphate of lime.

287,504. *Cork Puller or Screw.*—Frederick Coppel, Hoboken, N. J.

287,551. *Process of Making Sodium Carbonate.*—Clovis Knab, Houssigny, assignor to Société Anonyme Lorraine Industrielle, Nancy, France.

287,602. *Composition for Ague.*—Thomas A. Wilson, Lodi, Cal. Consists of pure water, whiskey, fluid extract of Jamaica ginger, and calabazilla root, or wild squash.

287,627. *Oil Filler.*—Rollin C. Clark, Corry, Pa., and William F. Bucher, Cleveland, Ohio.

287,642. *Medicated Soap.*—John James Dillard, Eureka Springs, Ark. Consists of Eureka Springs water, or its chemical equivalents, sulphur, glycerin, borax, chrysophanic acid, tincture arnica, cocoa-nut oil, and concentrated lye.

287,681. *Vaginal Syringe.*—Carl L. Jensen, Philadelphia, Pa.

287,701. *Veterinary Medicine.*—Thomas L. Miller, Pearsall, Tex. Consists of carbolic acid, infusion of elder, infusion of cactus, infusion of prickly-pear, pine-tar, and Castile soap.

287,760. *Ozone Generator.*—Wm. A. Gay, Tonawanda, assignor of one-half to John Otto, Buffalo, N. Y.

287,781. *Medicated Effervescent Salts.*—Caspar B. Shafer, Washington, D. C. The process of preparing effervescent natural mass which consists in evaporating natural water until the salts therein contained are reduced to a dry

powder, and then incorporating with the dry mass an acid or acid salt, and a suitable alkaline carbonate, or bicarbonate.

288,106. *Process of and Apparatus for Extracting Oil from Fish-Liver and Blubber.*—Freeman Paysant, Lockport, Nova Scotia, Can. Consists in interposing a stratum of water between the oil-yielding substance and the furnace.

288,140. *Pessary.*—William W. Turver, Parkdale, Ontario, Can.

ITEMS.

Theobald Frohwein, one of the best-known pharmacists of New York, died on November 16th, of pneumonia, after an illness of several weeks. He was born at Atzmannsdorf (Weimar, Germany), on September 7th, 1836. He graduated at the College of Pharmacy of the city of New York in 1863, was elected a member of the College on December 3d of the same year, and soon became one of its most active members. When the first Pharmacy Board was created, for the city and county of New York, by act of the Legislature, in 1871, he was appointed a member thereof, and, after this Board had been legislated out of office, and the organization of the new Board was delegated to the College, he was unanimously elected a member of it, in recognition of the valuable services he had rendered the profession. During his membership in the College, he held various offices, as Trustee, Vice-President, and Treasurer. In this latter capacity, from 1874 to 1880, his careful administration of the financial affairs of the College was one of the chief factors of the prosperous growth of the corporation. He was buried at the Lutheran cemetery, on November 18th, 1883.

M. Chevreul, the nestor of chemists, completed his ninety-eighth year of age on the 1st of September last. He was born at Angers in the night of August 31st, 1786. At the early age of twenty years, he was conservator at the Museum. Among his great discoveries in chemistry figure prominently the separation of the fat bodies and the chemical constitution of oleine, stearine, and margarine. To him is also due the doctrine of the contrast of colors, of their shades, and of the determination of shades.

Dr. Leonard D. Gale, an old, well-known scientist, and for a number of years an examiner in the chemical class at the Patent Office, died in Washington on October 23d, at the age of eighty-three. He was a great friend of Prof. Morse, and assisted him in building the first telegraph line between Washington and Baltimore. Dr. Gale went to Washington in 1846, and has since resided there. It was said in the early days of the electric telegraph that Prof. Henry's discoveries in electricity contributed very much to Prof. Morse's success, and that Dr. Gale was the mutual friend of both.

Dr. Henry Leffmann, Professor of Chemistry in the Philadelphia Polyclinic, has been elected to the chair of chemistry and metallurgy in the Pennsylvania Dental College, which had been rendered vacant by the death of Prof. T. L. Buckingham.

Eduard Van Der Heyden, President of the Antwerp Pharmaceutical Society, Vice-president of the Belgian Pharmaceutical Association, Honorary and Corresponding member of various scientific societies, etc., one of the leading pharmacists of Belgium, and well-known throughout the pharmaceutical world, died on October 17th.

William Squire, senior partner of the firm of Hearon, Squire & Francis, wholesale druggists of London, died on October 11th.

A. J. C. Geerts, Director of the Japanese State Laboratory, died recently in Japan. He entered the Dutch service as a military apothecary, and as such went into the service of the Japanese government, where he soon acquired a prominent position.

Oliver Wendell Holmes says that the great secret of success in every form of quackery is hope kept alive in the patient; while the too fatal gift of science is a prognosis of despair.

Dr. H. J. Menninger, the well-known Brooklyn pharmacist, has lately been elected a Coroner for Kings County.

Atlanta's Physicians.—One physician to every 277 of its population is the quota of doctors in Atlanta.

Tar may be readily removed from the hands by rubbing with the outside of fresh orange or lemon peel, and wiping dry immediately. The volatile oils in the peel dissolve the tar, so that it can be wiped off.

A World's Fair in New Orleans.—The New Orleans Council has granted the use of the upper city park for next year to the world's exposition, and appropriated $100,000 to embellish the grounds and erect a horticultural hall.

International Pharmaceutical Congress—The sixth meeting of the International Pharmaceutical Congress, which was intended to be held in Brussels, some time during 1884, has been postponed to the year 1885, owing to the impossibility of completing the preliminary work on the proposed international pharmacopœia before that time.

Pharmacopœia Corrections.

It is requested that the following alterations be made in any copy of the Pharmacopœia in which it may be found necessary:

PAGE	LINE		
11, 193, 206,	12 from top 4 " bottom 20 " top	}	Read: 2 in place of 0.5.
16, 398,	1 " bottom 4 " top	}	Read: 6.75 in place of 13.5.

139, lines 13 and 12 from bottom, read:
Alcohol,
Water, each, *a sufficient quantity*
in place of:
Alcohol, *one hundred and twenty parts*.....120
Diluted Alcohol, *a sufficient quantity.*

304, line 17 from top, read **Stronger Ether** in place of: **Ether.**

320, line 11 from top, read:
Sweet Orange Peel, recently separated from the fresh fruit, deprived of the inner white layer, etc., etc.

351, lines 17 and 18 from top, read:
Water, *forty parts*.....40
Alcohol, *forty parts*.....40
in place of:
Water, *four parts*..... 4
Alcohol, *four parts*..... 4

397, line 7 from bottom, read: 0.0027 for 0.0054.

By forwarding to the publishers, Wm. Wood & Co., 56 and 58 Lafayette Place, New York, a two-cent stamp, those who wish it can obtain a sheet of the size of the page of the Pharmacopœia, with the above corrections.

Grocer's Drugs.—In connection with the circular issued last year by a well-known wholesale grocer, recommending the addition of medicines to the stock of general store-keepers, it will interest some of our readers to know that the following so-called "grocer's drugs" appear among articles for which prices are quoted in one of the leading grocers' journals:

Acid, oxalic, in boxes	per doz.	75
Alum	per lb.	3
Ammonia, 20-lb. jars (jars 65 c.)	per lb.	21
Blue vitriol	per lb.	8
Brimstone, roll	per lb.	2¾
Camphor gum (5 and 10-lb. boxes)	per lb.	28
Castor oil, 2-oz. bottles	per doz.	50
Castor oil, 4-oz. bottles	per doz.	75
Copperas	per lb.	1½
Laudanum, 2-oz. bottles	per doz.	1 05
Licorice, gen. Calabria, 6-lb. boxes	per lb.	35
Licorice root, selected	per lb.	13
Paregoric, 2-oz. bottles	per doz.	60
Saltpetre, pure, 25-lb. boxes	per lb.	9
Saltpetre, pure, 100-lb. kegs	per lb.	8½
Saltpetre, double-refined	per lb.	11
Salts, Epsom	per lb.	2½
Salts, Glauber, per lb.	per lb.	2
Salts, Rochelle	per lb.	32
Spirits of nitre, 2 oz.	per doz.	75
Sponges, 36 on string	per string	1 25
Sulphur flour	per lb.	3½
Tincture of rhubarb, 2 oz.	per doz.	70

PHARMACEUTICAL CALENDAR.—JANUARY.

Additions to and Corrections of the following Calendar are solicited.

Date.	Society Meetings.	Date.	Society Meetings.
Wed. 2d.	Rhode Island Pharm. Assoc.—Annual Meeting at Providence.	Thurs. 10th.	Newark (N. J.) Pharm. Assoc.
Thurs. 3d.	Louisville (Ky.) Coll. of Pharm.		California Pharm. Soc.—Annual Meeting at San Francisco.
	Alumni Assoc. Philadelphia Coll. of Pharm.		Alumni Assoc. Philad. Coll. Pharm.—Philadelphia, Pa.
Fri. 4th.	Cleveland (Ohio) Pharm. Assoc.		Maryland Coll. Pharm.—Semi-annual Meeting at Baltimore.
	American Chemical Soc.—8 P.M., Univ. Building, New York City.		N. Y. German Apoth. Soc.—10 P.M., Beethoven Hall, Annual Meeting.
Mon. 7th.	Erie Co. (N. Y.) Pharm. Assoc.—Buffalo.		Lancaster Co. (Pa.) Pharm. Soc.
	Pittsburgh (Pa.) Coll. of Pharm.	Tues. 15th.	Alumni Assoc. St. Louis (Mo.) Coll. Pharm.
Tues. 8th.	St. Louis (Mo.) Coll. of Pharm.		Philadelphia (Pa.) Coll. of Pharm.
	Massachusetts Coll. of Pharm.—Boston.		St. Joseph (Mo.) Pharm. Assoc.
	National Coll. of Pharm.—Washington.	Tues. 22d.	Boston (Mass.) Druggists' Assoc.
Wed. 9th.	New York (City) Board of Pharm.—2 P.M., 209-211 E. 23d st.	Thurs. 31st.	Kings Co. (N. Y.) Board of Pharm.—Brooklyn
Thurs. 10th.	New York Coll. of Pharm.—209-211 E. 23d st., 8 P.M.		